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Integration of family planning with maternal health services: an opportunity to increase postpartum modern contraceptive use in urban Uttar Pradesh, India

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ABSTRACT

Background Maternal health (MH) services provide an invaluable opportunity to inform and educate women about family planning (FP). It is expected that this would enable women to choose an appropriate method and initiate contraception early in the postpartum period. In this study we examined interactions with health providers for MH services, and the effect of FP information provision during these interactions on the postpartum use of modern contraceptive methods.

Methods This study used midline data collected from 990 women who had delivered a live birth between January 2010 and the date of the midline survey in 2012. These women were asked a series of questions about their last delivery, including interactions with health providers during pregnancy, delivery and the postpartum period, if they received FP information during these interactions, and their contraceptive use during the postpartum period.

Results The study found that FP information provision as part of antenatal care in the third trimester, delivery and the postpartum period have a positive association with postpartum modern contraceptive use in urban Uttar Pradesh. However, health providers often miss these opportunities. Despite a high proportion of women coming into contact with health providers when utilising MH services, only a small proportion received FP information during these interactions.

Conclusions Integration of FP with MH services can increase postpartum modern contraceptive use. With the launch of the National Urban Health Mission, there now exists appropriate policy and programmatic environments for integration of FP and MH services in urban

Key message points

▶ Family planning (FP) information provided alongside maternal health (MH) services can enhance postpartum modern contraceptive use.
▶ Pregnancy, delivery and the postpartum period provide valuable opportunities for health providers to interact with women, but rarely do they utilise these encounters to provide FP information.
▶ The National Urban Health Mission provides an opportunity to operationalise the integration of FP with MH services through strong policy, capacity building of health providers and supportive supervision.

settings in India. However, this will require a concentrated effort both to enhance the capacity of health providers and encourage supportive supervision.

INTRODUCTION

The postpartum period provides a crucial window of opportunity in which to address unmet need for contraceptives for several reasons including the health benefits of an increased inter-pregnancy interval for mother and child, a high desire to delay or avoid subsequent births, and opportunities for interactions between women and health providers. Contraceptive use during the postpartum period has several health benefits for

both mother and child. For example, a study that examined data from 52 countries demonstrated a positive association between increased birth interval and child survival and reduced risk of undernutrition.[1] Another study showed that infants conceived 18–23 months after a live birth have a reduced risk of low birthweight and preterm birth.[2] Further, postpartum contraceptive use decreases the risk of subsequent maternal morbidity and mortality.[3][4] A study from Latin America and the Caribbean demonstrated that inter-pregnancy intervals of less than 18–23 months have higher risks for maternal death, premature rupture of membranes and other morbidities.[4]

Several studies have shown a higher desire among postpartum women to postpone subsequent births.[5–7] Recent evidence on unmet need among young married women aged 15–24 years from 61 countries showed that although the majority of women want to delay their next birth for at least 24 months, most of them were not using contraception.[5] There could be a number of reasons for this, including lack of knowledge about contraceptive methods, opposition from partners or family, or limited autonomy.[8–10] Misconceptions about the risk of pregnancy is another possible reason.[11][12] A 17-country study on sexual activity and use of contraceptives during the postpartum period showed a strong association between return of menses and contraceptive use, and indicated a lack of awareness of pregnancy risk prior to return of menses.[12]

Building on women's reported desire to delay their next birth, many programmes have integrated contraceptive information and services with postpartum care and have found that this has a significant influence on the use of contraceptives.[6][13–17] However, evidence regarding the effect of information provision during pregnancy on postpartum contraceptive use is rather mixed.[18–20] While studies in Bolivia, Egypt, Mexico and Thailand showed positive associations,[21][22] studies conducted elsewhere showed no or minimal effect.[18–20][23]

In this article we explore the extent to which FP information provision is integrated with maternal health (MH) services in urban Uttar Pradesh, India. We also assessed the effect of timing of FP information provision on the use of modern contraceptives during the postpartum period. Given the rapid urbanisation occurring both globally and specifically in India, and a renewed interest in FP, the results from this analysis shed light on integrating FP with MH services. Few studies to date have explored these aspects in India, and even less so in urban settings.

DATA AND METHODS
Context: urban Uttar Pradesh
Uttar Pradesh, one of the most populous Indian states, has a large urban population of around 44.5 million and around one-quarter of its inhabitants live below the poverty line.[24][25] It is also one of the least developed states, with poor MH and FP indicators.[26] Use of modern contraceptives is 42%, while unmet need is 15%.[26] Furthermore, there are high intra-urban differences between poor and non-poor individuals: only 24% of poor women reported using a modern contraceptive method, and 30% had an unmet need, compared to figures of 49% and 15%, respectively, among non-poor individuals.[27]

Recognising the needs of the urban poor, the Bill & Melinda Gates Foundation launched the Urban Reproductive Health Initiative in select cities in four countries – India, Kenya, Nigeria and Senegal – in 2009 with the aim of addressing unmet need and increasing modern contraceptive use in urban areas, particularly among the urban poor. In India, this initiative was called the Urban Health Initiative (UHI), and started in four cities in Uttar Pradesh, and subsequently expanded to seven further cities.

The UHI used multiple strategies, including integration of FP with MH services, social marketing, client outreach, and media campaigns to increase contraceptive uptake.[28] To facilitate integration, it carried out training of health professionals and community health workers (CHWs); promoted public–private partnership (PPP) to increase access to postpartum intrauterine device (IUD) use and sterilisation; and supported home visits during pregnancy and the postpartum period in order to provide FP information and services.

Data
In 2009, the Foundation funded the Measurement, Learning & Evaluation (MLE) project, which was responsible for the impact evaluation of UHI utilising a longitudinal study design.[29] At baseline, two-stage sampling was used to collect data from a representative sample of currently married women aged 15–49 years in six cities: Agra, Aligarh, Allahabad and Gorakhpur (early intervention cities) and Moradabad and Varanasi (delayed intervention cities) in 2010.[30] In total, there were 17 643 completed women interviews. The midline survey was undertaken in 2012 to provide the UHI with actionable measurements to decide on mid-course corrections. It was, therefore, restricted to only four early intervention cities with a reduced sample size. Only 60% of the primary sampling units (PSUs) were selected using stratified simple random sampling. In the selected PSUs, all the women who had participated in the baseline and were the usual household residents were approached for interview; this yielded 5790 completed interviews.[31] The ethical review boards of the International Center for Research on Women, the University of North Carolina and Sigma Research and Consulting Pvt. Ltd. approved this study. Informed consent and assent were obtained from respondents prior to interview in each survey round. Only female interviewers, who

had undergone 10 days of training, conducted the interviews in the women's local language.

The survey was carried out using structured translated (in the local language) and pre-tested household and individual questionnaires. The household questionnaire was designed to gather data on household characteristics including household assets; while the individual questionnaire included a series of questions on the background characteristics of the respondents, their birth history, knowledge and use of contraceptives, MH services, and media habits. It also included specific questions on interactions with CHWs and counselling on FP.

The data used in this article is restricted to the 990 women who delivered a live birth between January 2010 and the midline interview date. These women were asked a series of follow-up questions about their last delivery, including information on antenatal care (ANC), assistance at and place of delivery, and postpartum care. For the purposes of this article, the postpartum period is considered to be 12 months post-delivery.

The key outcome variable we examined was modern contraceptive use during the postpartum period of the last delivery since 2010. Modern contraceptive methods were female and male sterilisation, IUDs, oral pills, emergency contraceptive pills, injectables, male condom, female condom and spermicides. Postpartum contraceptive use was coded '1' for women who reported using any of the abovementioned methods during the postpartum period; those who reported using a traditional method or who did not use any method were coded '0'.

The key explanatory variables included in the analysis were: 'received information on FP from any health provider during ANC in the third trimester', 'received information on FP from any health provider after reaching the facility or before leaving the facility after delivery' and 'received information on FP from a health provider during the postpartum period'. The variables on receiving information on FP during ANC and the postpartum period were dichotomised with 'received information' coded as 1, while 'not received' was coded as '0'. The variable on receiving FP information during delivery was divided in three categories: home delivery, institutional delivery with no FP information, and institutional delivery with FP information. 'Health providers' included both health professionals and CHWs.

The background variables included: respondents' age at midline (grouped as 15–24, 25–29, 30–34 and 35+ years); years of schooling (0, 1–7, 8–11, and 12+ years); caste (scheduled caste/scheduled tribe, other backward caste and other caste); religion (Hindu and non-Hindu); household wealth quintiles (poorest, poor, middle, rich and richest); place of residence (slum and non-slum); city (Agra, Aligarh, Allahabad and Gorakhpur); and parity (1, 2, 3 and 4+ children). In addition, ever-use of modern contraceptive (yes or

no) and media exposure to FP at the time of baseline were included in the analysis.

Descriptive, bivariate and multivariate analyses were carried out to measure the extent of exposure to information during ANC, delivery and the postpartum period and its effect on the postpartum use of modern contraceptives. The Pearson Chi-square (χ^2) test of significance was used to test the significance of the difference in the means of categorical variables of interest with background variables. Logistic regression models assessed the relationship of the dependent and explanatory variables while adjusting for other background variables. Stata V.12 (StataCorp, College Station, TX, USA) was used for the analyses. Sampling weights were applied to all descriptive statistics to account for the survey design. In the regression models, standard errors were clustered at the PSU level to adjust for the sampling design.

The analysis included forward-wise five logistic regression models, which were time ordered with the antenatal period, delivery and postpartum period. The first model was presented to assess the effect of each background variable on the outcome variable without accounting for any explanatory variables of interest. In the second, third and fourth model, explanatory variables – 'received FP information during ANC in the third trimester', 'FP information received at the time of delivery' and 'FP information received during the postpartum period' – were included, respectively, with the background variables. In the fifth model, all explanatory variables were included to measure the adjusted contribution of each variable while adjusting for all other explanatory variables of interest on postpartum modern contraceptive use.

RESULTS

The sociodemographic characteristics of the sample of women who delivered since January 2010 are given in Table 1. At midline, 41% of the women were in the age group 25–29 years, and close to 28% were in the 15–24 years age group. More women were from the poor and poorest wealth quintiles than the rich and richest quintiles. Almost half belonged to the OBC, and three-quarters were Hindu. One-third had no schooling, while another third had 12+ years of schooling. Forty-four percent of women were from Agra, with 18–19% from each of the other three cities. Close to one-fifth had one child, whereas 24% had four or more children.

Table 2 presents the proportion of women who interacted with health providers during ANC in the third trimester, delivery and postpartum period, and the proportion who received FP information during those interactions by sociodemographic characteristics. Around one-third of women reported interacting with health providers during ANC. However, only one-fifth received FP information. Analysis by background characteristics demonstrated that the city of residence

Table 1 Percentage distribution of women who delivered since January 2010 according to sociodemographic characteristics at midline survey, 2012

Sociodemographic characteristics	%	n (unweighted)
Age (years)		
15–24	27.5	299
25–29	40.7	405
30–34	24.1	215
35+	7.7	71
Wealth		
Poorest	25.3	309
Poor	26.8	254
Middle	20.1	182
Rich	14.9	144
Richest	13.0	101
Caste		
SC/ST	25.6	274
OBC	45.4	468
Other	28.9	246
Missing	0.1	2
Religion		
Hindu	76.6	724
Non-Hindu	23.4	266
Schooling (years)		
0	32.3	345
1–7	13.6	147
8–11	23.0	239
12+	31.0	259
Place of residence		
Slum	19.8	539
Non-slum	80.2	451
Cities		
Agra	43.7	283
Aligarh	19.0	309
Allahabad	18.7	173
Gorakhpur	18.5	225
Parity		
1	21.4	227
2	36.3	326
3	28.7	199
4+	23.6	238
Total		990

OBC, other backward caste; SC, scheduled caste; ST, scheduled tribe.

had an effect on FP information provision during ANC, with a higher proportion of women from Allahabad receiving FP information compared to the other cities.

Seventy-seven percent of women reported undergoing institutional delivery, but only 22% received FP information at the facility. A lower proportion of women who were young, poor, and lesser educated received FP information.

Around half the women interacted with a health provider during the postpartum period, but only 12% received FP information. Interestingly, higher proportions of women from the poorest wealth quintile (18%) received information compared to the richest (7%). Parity and city were also found to be associated with information receipt.

Around one-third (36%) of women reported initiating a modern contraceptive during the postpartum period and this varied significantly according to wealth and education. A higher proportion of women from the richest wealth quintile, with 12+ years of schooling and who had previously used a modern contraceptive, reported using modern contraceptives compared to the others.

Logistic regression analysis for Model 1 with background characteristics (Table 3) shows that those women who had previously used modern contraceptives are 2.75 times more likely to use any modern method during the postpartum period. However, other background characteristics did not show any significant effect on modern contraceptive use.

ANC in the third trimester – Women who received FP information during ANC in the third trimester were 1.85 times more likely to use a modern contraceptive during the postpartum period compared to women who did not receive FP information, controlling for background characteristics (Model 2). Women who had used a modern FP method prior to their last birth are also more likely to use a modern contraceptive method, adjusting for other background characteristics.

Delivery – Place of delivery and FP information provision at the time of delivery are associated with postpartum modern contraceptive use, adjusted for background characteristics. The odds of use among women who delivered at a facility but did not receive FP information are 1.50 times greater than those who delivered at home; whereas those who delivered at a facility and received FP information are 1.99 times more likely to use. As in the earlier models, women who reported previous use of a modern contraceptive are more likely to use a modern method.

Postpartum period – Of the three time periods in which a woman reported receiving FP information, the strongest association with postpartum modern contraceptive use is among women who reported receiving information during the postpartum period (Model 4). These women are about 2.32 times more likely to be using a modern method. As in the other models, previous use of a modern contraceptive is strongly associated with postpartum use. In this model, wealth is also associated with use. Women from the poorest quintile are 50% less likely to use modern contraceptives compared to those from the richest quintile.

ANC, delivery and postpartum periods – When all three client–provider interaction points are included in the model (Model 5), the adjusted odds ratios (ORs) are attenuated but significant. The odds of using modern contraceptive are 2.00 for those who

Table 2 Percentage distribution of women who interacted with health providers and received family planning information during pregnancy, delivery and postpartum period, and use of modern contraceptives within 12 months of delivery by sociodemographic characteristics

| Socio-demographic characteristic | ANC in third trimester | | Delivery | | Postpartum care | | Modern contraceptive use within 12 months of delivery | Total number |
	Interaction with provider	Received FP information	Interaction with provider	Received FP information	Interaction with provider	Received FP information		
Overall	37.2	18.7	77.0	21.9	47.3	11.8	35.5	990
Age (years)								
15–24	37.9	17.0	77.0	12.7**	52.6	15.3	27.3	299
25–29	38.7	16.9	75.6	21.5	45.2	9.0	37.6	405
30–34	35.1	19.9	82.1	32.5	42.6	12.7	43.1	215
35+	34.1	30.9	68.5	24.6	54.1	10.5	29.3	71
Wealth								
Poorest	41.3	19.9	60.9***	21.4**	58.1	17.7*	23.6*	309
Poor	32.5	13.0	71.1	13.0	49.3	12.7	33.6	254
Middle	41.9	21.8	81.7	18.7	41.2	6.7	38.0	182
Rich	29.4	17.1	90.7	30.4	40.6	11.1	40.7	144
Richest	41.0	25.3	97.7	36.8	39.4	6.9	52.6	101
Caste								
SC/ST	33.2	16.2	75.2**	15.3	44.3	10.8	27.6	274
OBC	36.7	18.3	71.5	21.1	47.1	13.2	37.2	468
Other	41.8	21.6	87.2	29.2	50.3	10.3	39.6	246
Religion								
Hindu	37.3	17.4	80.6**	21.6	46.9	11.4	33.2	724
Non-Hindu	37.0	23.0	65.4	23.0	48.6	12.9	42.8	266
Schooling (years)								
0	32.1	13.9	60.3***	12.7***	49.6	12.3	24.3**	345
1–7	42.2	18.1	70.2	11.3	58.8	18.3	34.0	147
8–11	45.3	22.6	80.4	26.1	48.7	10.9	38.1	239
12+	34.5	21.2	94.9	33.1	38.8	8.9	45.8	259
Place of residence								
Slum	37.3	18.5	79.1*	23.0	47.8	11.0	36.4	539
Non-slum	37.3	19.6	68.4	17.5	45.3	14.9	31.7	451
Cities								
Agra	35.3	12.4**	78.5	14.8**	53.1***	8.1**	31.6	283
Aligarh	40.2	21.6	69.8	23.0	67.2	24.1	35.7	309
Allahabad	42.0	33.2	79.4	39.3	25.1	8.6	43.7	173
Gorakhpur	33.9	16.0	78.4	20.3	35.7	11.0	36.0	225
Parity								
1	47.6*	21.8	86.9***	24.9	46.9	8.5*	30.0	227
2	29.4	15.7	81.1	18.2	43.2	8.8	33.0	326
3	35.8	15.6	74.1	22.1	46.2	10.7	39.4	199
4+	41.2	23.1	64.1	24.8	54.8	20.1	41.2	238
Ever used modern FP method								
Yes	34.9	20.0	79.2	23.6	43.4	10.5	52.0***	655
No	38.6	18.1	75.8	21.1	49.4	12.5	26.5	335

Used Pearson Chi-square (χ^2) test (p values adjusted for survey design) to indicate whether there is a significant difference in the mean of categorical variables of interest – interaction with health providers and receiving FP information during ANC in the first trimester, at the time of delivery and during the postpartum period, and FP use during the postpartum period – with background variables.
*$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$.
ANC, antenatal care; FP, family planning; OBC, other backward caste; SC, scheduled caste; ST, scheduled tribe.

received FP information during the postpartum period compared to those who did not. The adjusted OR is 1.57 for those who delivered at a facility but did not receive FP information and 1.70 for those who delivered at a facility and received FP information. Even in this model, those women who received

Table 3 Multivariate logistic regression odds ratio for the use of modern contraceptive methods within 12 months postpartum period

Characteristic	Model 1	Model 2	Model 3	Model 4	Model 5
Received FP information during ANC in third trimester		1.85*** (1.32–2.60)			1.48* (1.04–2.12)
FP information at delivery (Ref. Home delivery)					
Delivered at facility but no FP information received			1.50* (1.04–2.17)		1.57* (1.07–2.30)
Delivered at facility and received FP information			1.99** (1.25–3.17)		1.71* (1.04–2.79)
Received FP information during postpartum period				2.32*** (1.55–3.46)	2.03** (1.43–3.08)
Age (years) (Ref. 15–24)					
25–29	1.01 (0.69–1.50)	0.99 (0.67–1.45)	0.99 (0.68–1.47)	1.08 (0.74–1.60)	1.03 (0.71–1.52)
30–34	0.95 (0.58–1.54)	0.94 (0.58–1.53)	0.88 (0.55–1.43)	1.04 (0.65–1.67)	0.96 (0.60–1.53)
35+	0.58 (0.29–1.15)	0.53† (0.27–1.06)	0.57 (0.29–1.14)	0.64 (0.32–1.26)	0.59 (0.29–1.19)
Wealth quintiles (Ref. Richest)					
Poorest	0.53† (0.26–1.06)	0.54† (0.27–1.07)	0.55† (0.27–1.11)	0.49* (0.25–0.99)	0.53† (0.27–1.06)
Poor	0.87 (0.45–1.67)	0.90 (0.48–1.73)	0.91 (0.47–1.75)	0.85 (0.44–1.65)	0.91 (0.47–1.75)
Middle	0.86 (0.46–1.64)	0.89 (0.47–1.67)	0.88 (0.47–1.65)	0.86 (0.45–1.61)	0.88 (0.47–1.66)
Rich	0.78 (0.41–1.47)	0.82 (0.44–1.54)	0.79 (0.42–1.49)	0.78 (0.42–1.47)	0.82 (0.44–1.54)
Education (years' schooling) (Ref. 12+)					
0	0.60† (0.34–1.07)	0.61† (0.34–1.10)	0.66 (0.37–1.19)	0.63 (0.35–1.13)	0.69 (0.38–1.26)
1–7	0.67 (0.37–1.19)	0.65 (0.36–1.15)	0.71 (0.39–1.28)	0.65 (0.36–1.17)	0.67 (0.37–1.22)
8–11	0.78 (0.47–1.28)	0.75 (0.46–1.25)	0.80 (0.49–1.33)	0.78 (0.47–1.29)	0.79 (0.47–1.30)
Parity (Ref. 1)					
2	0.98 (0.64–1.48)	1.01 (0.66–1.53)	0.99 (0.65–1.51)	0.92 (0.61–3.87)	0.95 (0.63–1.45)
3	1.19 (0.73–1.96)	1.22 (0.74–2.00)	1.22 (0.74–2.01)	1.11 (0.68–1.83)	1.17 (0.70–1.94)
4+	1.46 (0.81–2.62)	1.44 (0.80–2.61)	1.56 (0.85–2.85)	1.27 (0.71–2.29)	1.39 (0.76–2.53)
Ever use of modern method prior to last birth reported at midterm	2.75*** (2.01–3.76)	2.76*** (2.02–3.79)	2.70** (1.97–3.72)	2.82*** (2.05–3.87)	2.77*** (2.01–3.82)
Worked in the last 12 months	1.84 (0.16–21.2)	1.59 (0.15–16.82)	2.02 (0.19–21.69)	1.77 (0.20–15.57)	1.77 (0.22–14.28)
Recall FP messages on TV, radio or newspaper at baseline	1.05 (0.77–1.44)	1.03 (0.75–1.42)	1.01 (0.73–1.40)	1.06 (0.77–1.45)	1.01 (0.73–1.40)
Religion (Ref. Hindu)					
Other religions	1.46† (0.96–2.06)	1.41† (0.96–2.07)	1.45† (0.99–2.12)	1.45† (1.00–2.13)	1.48* (1.01–2.18)
Caste (Ref. SC/ST)					
OBC	1.22 (0.80–1.87)	1.22 (0.80–1.88)	1.25 (0.81–1.94)	1.22 (0.79–1.87)	1.25 (0.80–1.95)
General caste	1.28 (0.82–2.02)	1.28 (0.82–2.02)	1.29 (0.81–2.04)	1.26 (0.80–1.99)	1.28 (0.81–2.02)
City (Ref. Agra)					
Aligarh	1.38 (0.91–2.07)	1.28 (0.84–1.95)	1.38 (0.91–2.08)	1.17 (0.77–1.78)	1.17 (0.77–1.79)
Allahabad	1.31 (0.82–2.09)	1.18 (0.73–1.91)	1.29 (0.81–2.07)	1.22 (0.76–1.96)	1.18 (0.72–1.91)
Gorakhpur	1.04 (0.67–1.61)	1.01 (0.65–1.59)	1.06 (0.69–1.63)	1.02 (0.66–1.59)	1.05 (0.68–1.62)
Slum (Ref. Non-slum)	0.92 (0.67–1.25)	0.90 (0.66–1.23)	0.95 (0.69–1.29)	0.89 (0.65–1.20)	0.91 (0.66–1.25)
Observations	988	988	988	988	988

Exponentiated coefficients; 95% confidence intervals in brackets.
†p≤0.10; *p≤0.05; **p≤0.01; ***p≤0.001.
ANC, antenatal care; FP, family planning; OBC, other backward caste; Ref., reference; SC, scheduled caste; ST, scheduled tribe.

FP information during ANC in the third trimester were 1.48 times more likely to use postpartum modern contraceptives than those who did not. Ever-use of a modern method remains highly significant even in this model.

DISCUSSION

In urban Uttar Pradesh, with around 50% modern contraceptive use, and high unmet need (between 10% and 17%),[30] investigating the effectiveness of providing FP information through MH services on postpartum contraceptive use, and the extent to which providers utilise these opportunities, are increasingly important. When women come in contact with a health provider they may be ambivalent about contraceptives, or they may want to initiate but be unsure of what method(s) they can use given their personal circumstances. At these points of contact, if women receive appropriate FP information then they can make the transition from indecision or non-use to use.

The importance of FP information provision during ANC is well recognised globally; ANC service delivery guidelines in several countries, including India, include directives on providing counselling and FP information during ANC visits.[8 17 20 32] Despite this, earlier studies have shown mixed results concerning the relationship between prenatal receipt of FP information and postpartum use of modern contraceptives.[17 18 20 21] The present study found that women who received FP information during ANC in the third trimester are more likely to use postpartum modern contraceptives; this finding supports inclusion of FP counselling at ANC visits in service delivery guidelines. Our results also demonstrated that place of delivery, and provision of FP information during delivery and the postpartum period, are positively associated with postpartum contraceptive use. This is consistent with findings from other studies.[6 14 17]

While provision of FP information and services in tandem with MH services seems to be effective, descriptive analyses in this study demonstrated that more often than not these interactions are missed. Similar practices were noted in earlier studies also.[18 22 33 34] For instance, Vernon[18] found that the proportion of women who received any information related to FP with ANC remained low in several countries across Latin America, the Caribbean and sub-Saharan Africa.

The gap in interaction and provision of FP information during delivery was particularly stark in the present study. This could be because of delayed arrival of women at the facility and early departure after delivery, giving limited time to providers to engage in any meaningful conversation with the women in order to understand their FP needs and preferences.[35] On the supply side, there may be a range of factors such as overburdened health providers, lack of training and supervision, disregard or lack of understanding of women's comprehensive needs and rights, and in adequate facilities for integrated services that adversely affect integration of FP with MH services.[8 19 36 37]

Overall, the present study strengthens the argument that integration of FP with MH services can enhance postpartum modern contraceptive use, and also reveals gaps in utilising these interactions. Being linked with a larger urban health intervention that aims to improve access and quality of FP services, this article has the potential to influence strategies and operational plans of the National Urban Health Mission (NUHM), a flagship programme of the government of India.

Launched in 2013, NUHM seeks to facilitate equitable access to quality health care through a revamped public health system, PPP, and community-based mechanisms.[38] It has made the provision of CHWs for slum communities, who will be responsible for FP counselling, facilitating women's access to ANC and postpartum care, and accompanying them to a health facility for delivery, and be depot holders for OCP and condom. Given their roles, it is logical to expect that CHWs will provide FP information and facilitate access to services together with MH services. However, as we found in the present study, the mere existence of two services is not enough to guarantee the delivery of integrated services. This will require conscious effort to present these services as integrated components through training and supportive supervision.[19 39]

Similarly, another scheme, Janani Suraksha Yojana (JSY), provides an opportunity of integrating FP with MH services. This scheme provides cash incentives to women for deliveries at a health facility and has shown positive effects on the utilisation of MH services.[40] Though the same study did not find any association between JSY and postpartum contraceptive use in urban area, there is potential to utilise these interactions to provide FP information and promote contraceptive use.

This study has a number of limitations that are worth mentioning. First, while we were able to capture data for the women who were exposed to FP information when utilising MH services, we do not know about the quality and content of these interactions. Future studies could investigate in greater depth the type of information provided. Second, we were not able to assess why some women were exposed to FP information and others were not. This may relate to provider barriers around service provision, as found by Brickley et al.,[19] where providers lacked support, time and guidance to ensure quality of services. There is a risk of recall bias, particularly for women who delivered at the beginning of the 2-year reference period. On account of the small sample size, we were unable to analyse a shorter reference period for this study. Additionally, social desirability bias may be a factor in this study, where respondents may be inclined to respond favourably to survey questions if they feel that there is a 'correct' response. This may over-report exposure to programmatic efforts or FP use. As the responses are self-reported, there is no way to validate them.

Clearly, there is a need to deliver FP services to those women who need them and who are interested in using them during the postpartum period, presently lagging behind in the Indian health care scenario.[41] However, the transition from policy discourse to programmatic action may be delayed unless evidence such as that presented in this article is able to reinforce women's specific needs for timely information at critical points in their MH care-seeking.

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