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UTILIZATION OF HEALTH CARE SERVICES AND RCH STATUS IN UTTAR PRADESH, INDIA

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ABSTRACT

The study attempts to explore the pattern of utilization of RCH services viz. antenatal care, safe deliveries, child immunization and reproductive and child health status (complications during pregnancy, delivery and post-delivery etc.) in the districts of Uttar Pradesh. The linkages of different socio-economic and demographic indicators with utilization of services and RCH status are also studied. The study elicits district wise reproductive health status indices. Further some indices namely; index of social development, health facilities, utilization of services, reproductive morbidities and index of quality of care has been computed for all districts. As a final point, the correlation of these indices with indices of reproductive and child health has been illustrated. The study reveals that utilization of health services and social development depicts strong negative relation with reproductive morbidities.

INTRODUCTION

Reproductive health issues have attained higher international visibility and renewed social and political commitments in recent decades. To accelerate the level of awareness and action, a meeting of patterns for safe motherhood was held in Washington D.C. in March 1992. The meeting introduced a new phase of safe motherhood initiatives to make an existing action of designing and implementation of community level programs to provide increased and improved family planning, pregnancy and delivery care for women (Eschen, 1992). After ICDP conference (1994), the concept of Reproductive Health attracted a wide attention among academician, researchers and in Government and NGOs' programme and activities. It has a multidimensional sphere which generally includes pregnancy, child birth and post partum care, breast feeding, maternal and infant nutrition, infertility, sexual behaviour, STDs and HIV/AIDS, reproductive rights and freedom and women's status and empowerment. Under these circumstances there is an increasing thinking in the scientific community about the need to give stress on maternal health, in essence of their reproductive health problems (Jejeeboy, 1997; Pachauri, 1996).

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Government of India has launched several programmes related to maternal and child health from time to time and updates its strategies in order to improve health status of women and children and fulfill the unmet need of the MCH care through out the country. Since the introduction of family welfare programmes in First Five Year Plan (1951-56), Government has taken various steps to strengthen the maternal and child health. Maternal and child health and nutrition were integrated with family planning programme during fifth five year plan (1974-79). In year 1992-93 the programme was renamed as child survival and safe motherhood programme (CSSM), with intention to improve quality and utilization of MCH services. But in the year 1997, the proramnme was again renovated and labeled as Reproductive and Child Health (RCH) - which incorporate all components of Child Survival and Safe Motherhood (CSSM) and additional introduced new components related to reproductive tract infections and sexually transmitted infections. Broadly, the programme aims to universalize the immunization antenatal care, skilled attendance during delivery as well as for common childhood elements. A step further new endeavor of Government of India, National Rural Health Mission (NRHM, 2005) outlines its objectives, 'to promote equity, efficiency, quality and accountability of public health services through community driven approaches, decentralization and improving local governance. Despite of all these programme and efforts, some studies have revealed that reproductive and child health

situation in India is very panic, especially in northern states. In the northern states viz. Uttar Pradesh, Bihar, Madhya Pradesh and Rajasthan, the utilization of Government health facilities for delivery was poor that is only 5 to 16 percent, whereas home deliveries were widely prevalent and largely attended by untrained birth attendants that is 80 to 92 percent with greater probability of high risk of maternal morbidity and mortality (Raju, 2002). The variation in RCH indicators shows that there exists a wide variation among different states and among different regions within a state. The variation in RCH outcome indicators is also notified among different districts within a region of the state (Raju, 2002). A glance of maternal and child health indicators of Madhya Pradesh shows that they are far below than Indian average. Madhya Pradesh state, only second to Orissa, has highest maternal and infant mortality rates (SRS, 2005). Nevertheless a wide inter-district variations in demographic and RCH indictors is also observed. The infant morality varied from 122 deaths per 1000 live births in northern region to 80 in the southern region. Similarly, the crude birth rate varied from 35 births per 1000 population in the northern region to 28 in the south central region of state (Government of Madhya Pradesh, 2000). There are number of districts in the state where the risk of a maternal death remains extraordinary high (Ranjan, 2000). With this, a need was felt to explore the inter districts variation in RCH indicators in the state of Madhya Pradesh. This study is thus aimed to examine the variation in the utilization of health services and reproductive and child health status among the districts of Madhya Pradesh.

MATERIAL AND METHODS

The district level analysis is done for all districts as curved out in 2011 Census. The state was divided in to 70 administrative districts grouped in four geographical regions, namely Western Region, Central Region, Eastern Region and Bundelkhand Region. To study the inter-districts variation in the utilization of health services and its outcomes in terms of reproductive and child health status, different datasets has been utilized. These datasets are as Census of India 2011 (Census of India 2011 & 2011a), District Level Health Survey-3, 2007-08 (IIPS, 2007), Facility Survey 2007 (IIPS, 2007a) and Socio-Demographic Database prepared by NIMS (ICMR) New Delhi (NIMS, 2004). Different composite indices are computed to study the pattern of socio-economic development, availability of health facilities, utilization of RCH services and reproductive and child health status in the districts of Uttar Pradesh state. All districts are ranked according to the absolute values of these indices. A composite index may encompass information for several indicators. The indicators may be grouped into positive and negative indicators. But before computing a composite index it needs to make them uniform, i.e. each indicator needs to be standardized. The positive and negative indicators are standardized as:

$$\text{For a Positive indicator} = \quad X_i = \frac{V_i - V_{min}}{V_{max} - V_{min}} * 100$$

Where as V_i is the value of a indicator for i^{th} district and V_{max} and V_{min} are the maximum and minimum value of that particular indicator.

$$\text{For a negative indicator} = \quad X_i = \frac{V_{max} - V_i}{V_{max} - V_{min}} * 100$$

But before computing a composite index, each indicator used in the index is assigned a weight, the weight for each indicator is computed as

$$W_i = \frac{\dfrac{1}{\sqrt{Var(X_i)}}}{\Sigma \dfrac{1}{\sqrt{Var(X_i)}}}$$

And finally, using these weights a composite index is computed as

$$Ci = \sum_{i=1}^{n} Wi * Xi$$

Where Xi is the standardized value of an indicator and Wi is the weight assigned to that particular indicator and n is the number of indicators included in the composite index.

RESULTS AND DISCUSSION

Socio-economic development

Utilization of health services and health outcomes depends on the socio-economic development of the communities. The economical well off respondents and those who are from higher social status families have better utilization of health services (Navaneethan and Dharmalingam, 2002). The district with better socio-economic development will be having better health status too (Ranjan and Sharma, 2002). A composite social development index (SDI) is computed by taking into account the information on three important indicators, viz. proportion of women marry before age 18 years, female literacy and proportion of males working in non-agricultural sector.

Table 1. Socio-demographic and RCH Profile of Uttar Pradesh

Indicators	Uttar Pradesh	India
Demographic Indicators		
Population Census-2011)	199,812,341	1,210,854,977
Density (persons per sq km)	829	382
Sex ratio (female per 1000 males)	912	940
Av. annual exp. growth rate (%) Census (2001-11)	1.85	1.64
Urbanization (Census)	22	31
Male Literacy	79	82
Female Literacy	59	65
CBR (SRS, JAN- 2011)	28.7	22.5
CDR (SRS, JAN- 2011)	8.2	7.3
TFR (NFHS-3)	3.8	2.6
IMR (SRS, JAN- 2011)	63	50
MMR (SRS, June- 2011)	359	212
Decadal Groth Rate (census-2010-11)	20	17.6
RCH indicators (Percentage)		
Girls married before age 18 (Census-2011)	30.52	30.20
Contraceptive use modern (DLHS-3)	27.3	48.5
Full ANC (DLHS-3)	3.3	18.8
Delivery at home	74.6	52.4
Full Immunization (12-35 months) DLHS-3	30.2	53.4
Birth order 3+ (DLHS-3)	55	39

The index reflects the social and economic development status of districts. The five best and worst performing districts with their respective values of social development index and all used indicators are given in Table 2: The respective values of index and ranking for all other districts are given in appendix I.

Table 2. Ten best and worst performing districts according to social development index (SDI)

Rank	Districts	Women married Before 18 yrs (%)	Female Literacy (%)	Males in non-agri. Sectors (%)	SDI
1	Kanpur Nagar	24.21	66.6	45.0	92.2
2	Lucknow	25.15	63.1	44.8	88.1
3	Ghaziabad	23.32	59.8	45.7	88.0
4	Gautam B. Nagar	26.61	60.3	45.8	85.7
5	Meerut	22.83	54.8	42.6	80.0
6	Saharanpur	18.22	52.5	36.8	74.5
7	Baghpat	25.23	51.1	40.7	72.2
8	Varanasi	35.27	57.8	42.3	71.6
9	Agra	25.57	51.9	39.7	71.4
10	Bijnor	16.4	50.7	34.1	71.0
61	S.R.N. (Bhadohi)	48.29	47.1	35.1	41.7
62	Sonbhadra	35.37	43.1	27.1	39.0
63	Gonda	40.21	39.2	31.3	36.9
64	Sultanpur	47.78	49.9	28.8	36.4
65	Bahraich	30.91	31.6	29.5	36.0
66	Siddharthnagar	34.07	38.6	26.5	35.4
67	Lalitpur	61.31	42.0	41.5	34.3
68	Mahrajganj	37.44	41.3	24.3	32.0
69	Balrampur	36.2	31.3	29.1	30.6
70	Shrawasti	42.28	28.0	30.3	24.2

Table 3. Ten best and worst performing districts according to index of reproductive health (RHI)

Rank	Districts	Pregnancy compl.	Delivery compl.	Post-delivery compl.	Menstruation Related compl.	Any Symptom RTI/STIs	RHI
1	Lucknow	44.5	33.1	8.9	9.7	5.10	91.64
2	Jhansi	45.4	56.2	5.2	11.4	7.46	83.89
3	Balrampur	54.4	29	18.2	20	4.42	73.92
4	Mahoba	48.7	53.1	6.9	17.8	15.21	73.24
5	Gonda	49.2	52.8	16.9	14	6.21	72.97
6	Agra	50.4	39.8	12.9	17.7	15.70	72.01
7	Mathura	51.5	43.9	12.5	16.7	15.53	71.20
8	Ballia	39.8	75.3	17.9	9.5	10.18	70.60
9	Ambedaker Nag	56.5	53.1	12.7	16.2	11.56	67.94
10	Kanpur Nagar	62.1	63.7	7.9	13.6	11.23	67.26
61	Muzaffarnagar	74	75.7	13.2	23.7	35.26	33.14
62	Kheri	71	70.3	27.5	25.1	20.07	32.69
63	Pilibhit	73	73.2	25.6	24.5	27.22	28.75
64	Aligarh	70.3	80.2	16.5	28.4	35.65	27.46
65	Auraiya	69.3	75.9	17.8	31.1	34.76	26.96
66	Shahjahanpur	67.8	76.2	11.9	31	28.74	26.14
67	Kannauj	80.1	84.3	23.1	20.4	31.36	24.06
68	Mirzapur	77.3	83.4	17.5	31.3	32.86	21.51
69	Moradabad	71.6	70	22.8	34.3	40.95	18.34
70	Budaun	76.7	69	28	35.3	33.82	15.22

The values and ranking of districts according to SDI index reflect that most of districts of western and southern (slightly central) region are relatively better off. The important districts like Kanpur Nagar, Lucknow Ghaziabad, Gautam Buddha Nagar, Meerut Sahjahanpur and Baghpat also have better social and economical development. Districts like Srawasti, Balrampur, Maharajganj, Lalitpur Sidharthnagar, Baharaich and Sultanpur are least developed. The most of southern districts have higher values of development index, which reflects a strong clustering in social development within the state.

Reproductive health scenario

The complications that affect women during pregnancy and childbirth, affect the feotus as well, are by products of poorly managed pregnancies, quality of care provided during deliveries and delay or non-availability of medical facilities. Among them most of the pregnancy related complications could be effectively prevented or managed. Experience has shown that maternal and neonatal mortality can be reduced when communities are informed about danger signs or symptoms, and develop a referral system to manage

complications at adequate level of the health care system (WHO, 1994). The inter-district variation in reproductive health status is measured in terms of women having any complication during pregnancy, delivery and post-delivery period. Higher complications among women reflect poor reproductive health situation in the district. A reproductive health index is computed using indicators like proportion of women had any pregnancy complications, delivery complications, post-delivery complications, complications related menstruation and had any symptoms of RTI/STIs. The reproductive heath complications were least reported in districts like Lucknow, Jhansi, Balrampur, Mahoba, Gonda, Agra and Mathura (Table 3). Whereas it was higher in districts Budaun, Muradabad, Mirzapur, Kannauj, Sahajahanpur Auraiya, and Aligarh. Overall, reproductive health index (RHI), districts from north-east and central and south region has better status.

Child health scenario

Child health is another important component of RCH programme. To study child health status it is important to look into prevalence of some of the diseases prone to children.

Table 4. Ten best and worst performing districts according to index of child health (CHI)

Rank	Districts	Diarrhea	ARI	CHI
1	Jhansi	5.9	2	95.17
2	Ballia	5.8	2.3	94.78
3	Jaunpur	4.6	4.7	92.43
4	Sultanpur	5.1	4.3	92.27
5	Saharanpur	7.9	2	91.45
6	Sonbhadra	5.4	5.3	89.80
7	Basti	7.4	3.7	89.14
8	Lucknow	8.8	2.7	88.44
9	Fatehpur	6.7	5.8	86.43
10	Rae Bareli	10.3	2.3	86.42
61	Gorakhpur	19.4	22.8	30.38
62	Aligarh	24.2	18.2	30.24
63	Bulandshahar	19.4	23.1	29.81
64	Sitapur	27.7	16.3	27.37
65	Shrawasti	25.5	19.2	25.92
66	Agra	20.8	24.7	24.15
67	Firozabad	27	19.2	23.13
68	Bahraich	23.6	24.7	18.95
69	Etawah	28.3	23.6	12.32
70	Kheri	33.8	22.8	3.63

Table 5. Ten best and worst performing districts according to index of utilization of RCH services (URCHI)

Rank	District	Contraceptive use	Full ANC	Safe Delivery	FullImmunization	Sought treatments for complications					URCHI
						Pregnancy	Post-delivery	Ab. Vaginal Dis.	Diarrhea	ARI	
1	Lucknow	38.4	8.3	50.8	52.4	45.9	77.4	64.8	91.2	100	81.51
2	Varanasi	47.2	3.4	50.7	54.5	67.8	45.7	79.4	75	75	71.71
3	Meerut	38	5.9	45.1	35.6	54.9	68.8	54.9	84.3	87.2	67.71
4	Baghpat	39.1	6	36.1	32.6	50.9	77.2	50.9	80.4	89.8	64.81
5	Deoria	26.5	6.2	46.7	56.8	48.3	60.3	41.1	83.6	88.3	63.77
6	Ghaziabad	41.5	8.8	45.7	31.5	49.8	61	48.3	70.7	83.6	62.25
7	Pratapgarh	24.4	7.5	43.3	50.3	50.9	68.8	45.5	75.6	75.3	60.91
8	Saharanpur	42.7	3.3	34.2	38	46	61	44.7	89.7	93	60.65
9	Basti	18.9	6	36.5	51.6	48.9	69.6	47.7	82.5	78	59.55
10	Gorakhpur	35.2	10.1	39.8	46.9	49.9	52.7	36.6	70.4	81.7	59.52
61	Hardoi	15.9	0.9	14.9	26.5	41.5	62	37.7	73.7	77.2	35.54
62	Banda	27.2	3.8	24.9	18.4	35.1	46.2	38.5	70.1	67.3	33.74
63	Hamirpur	43.5	1.3	39.5	44	33.2	41.6	24.7	44.9	71.4	32.60
64	Shahjahanpur	19.7	1.2	11.1	21.7	44.9	62.5	31.7	64.7	78.7	32.56
65	Sonbhadra	40.1	1.6	31.3	42.6	33	40.8	33.8	63.7	50	31.88
66	Siddharthnagar	11.9	2.3	13.3	38.9	34.6	58	30.7	69.7	70.1	31.54
67	Fatehpur	18.3	2.8	20.9	21.6	31	46.8	30.7	74.3	77.8	31.35
68	Budaun	12.8	1.2	13.8	13.5	32.2	60.7	33.9	79.6	79.7	30.76
69	Kanpur Dehat	29.2	3	24.9	42.7	25	36.4	17	53.4	60.4	22.79
70	Chitrakoot	33.9	1.9	23.9	19.3	31.1	34.3	27.4	56.3	52.8	20.13

In DLHS survey information is only available for the prevalence of Diarrhoea and ARI during two weeks before the survey. A composite index is computed with indicators like proportion of children who had Diarrhea and proportion of children having ARI. Table 4 shows the inter-district variations in the child health within Uttar Pradesh. Districts like Jhansi, Ballia, Jaunpur, Sultanpur, Saharanpur, Sonabhadra, Basti, Lucknow, and Fatehpur have better child health, while it is worse in districts like Kheri, Itawah, Bahraich, Firozabad, Agra, Srawasti, Sitapur, Bulandsahar, and Aligarh.

Utilization of RCH services

The health status of inhabitants of a region depends on the availability and utilization of health services. However, some study argued that mere existence of health services is not enough for better utilization of health services, physical proximity of health facilities also play important role in utilization of these services (Stock, 1983; Paul, 1991; Chakraborty *et al*. 2003).

The utilization of health services is a complex behavior phenomenon related to availability, accessibility, affordability and quality of health services (Abbas *et al*, 1986; Becker *et al*, 1992; Bloom, and Das Gupta, 2001; Stephenson and Tusi, 2002). To study the pattern of health services utilization, especially RCH services, in districts of Madhya Pradesh a composite index is computed. Which includes the information on indicators like proportion of women using contraceptives (modern methods), received full ANC (3 ANC visits, 1 TT, 100 + IFA Tablets), proportion of safe delivery (Institutional/ attended by skilled person), proportion of fully immunized children, proportion of women sought treatment for pregnancy complications, pot-delivery complications, for abnormal vaginal discharge, and proportion of children received treatment for Diarrhoea and for ARI. The ranking of districts according to index of utilization of RCH services reveals that districts like Lucknow, Varansi Merut, Baghput, Deoria, Ghaziabad, pratapgarh and Saharanpur are performing better (Table 5). While Chitrakoot, Kanpur Dehat, Budaun, Fatehpur, Siddharthnagar, Sonbhadra, Sahajahanpur, Hamirpur, Banda, and Hardoi are some poorly performing districts. Most of

districts adjoining to central region of Uttar Pradesh state have poor utilization of RCH services.

Utilization of Government health services

Both union and state Governments have created gigantic health infrastructure in terms of buildings and health personnel. Each district have a district hospital, a CHC centers on average per lakh population and a PHC for every 20,000- 30,000 population and for every 5,000 population a sub-centre is established.

fharrukhabad, Siddharthnagar, Jhansi, Banda, Budaun, fatehpur, chitrakoot and Kanpur Dehat districts.

Quality of care

The provision of quality health care service, health infrastructure, health personnel are considered to be essential elements for improving health of mother and child (Gulati & Sharma, 2004). Good quality of health services may enhance the demand of various health services (Verma et al, 1994). Though, Government have establish huge health infrastructure

Table 6. Ten best and worst performing districts according to index of utilization of Govt. health facilities (UGHI)

| Rank | Districts | Utilization of Govt. of Health facility for | | | | | UGHI |
		ANC	Delivery	Pregnancy Comp.	Post Delivery Comp.	Vaginal Discharge	
1	Lucknow	49.9	47.4	45.9	77.4	64.8	76.62
2	Varanasi	52.6	54.5	54.5	67.8	45.7	71.33
3	Mau	56.4	39.8	62.2	58.2	48.5	69.03
4	Meerut	45.4	38.8	54.9	68.8	54.9	67.59
5	Azamgarh	52.4	48.6	52.9	61.6	48.6	67.51
6	Baghpat	53	32.2	50.9	77.2	50.9	67.13
7	Ballia	61.4	34.5	59	61.7	43.6	66.18
8	Pratapgarh	65.5	29.5	50.9	68.8	45.5	65.52
9	Gonda	59.6	19.4	59.6	74.5	43.3	64.22
10	Sitapur	41.9	21.4	52.1	86.9	50.2	61.95
61	Shahjahanpur	44.2	8.8	44.9	62.5	31.7	36.29
62	Unnao	70.3	17.6	28	45.4	27.8	34.33
63	Farrukhabad	32.2	13.4	43.6	62.2	32.9	32.97
64	Siddharthnagar	47.9	9.7	34.6	58	30.7	31.08
65	Jhansi	56	40.3	25.2	30.7	26.4	29.91
66	Banda	31.7	17.6	35.1	46.2	38.5	27.55
67	Budaun	27.2	10.9	32.2	60.7	33.9	24.38
68	Fatehpur	35.3	15.6	31	46.8	30.7	22.43
69	Chitrakoot	36.4	17.9	31.1	34.3	27.4	17.71
70	Kanpur Dehat	39.8	21.7	25	36.4	17	12.96

Table 7. Ten best and worst performing districts according to index of quality of care (QCI)

Rank	Districts	ANC at home	Full ANC	Safe Delivery	Visited by health worker	QCI
1	Pratapgarh	12.3	7.5	43.3	13.8	63.17
2	Gorakhpur	14.1	10.1	39.8	8.8	60.32
3	Jaunpur	23.5	4.8	45.2	12.6	58.93
4	Sultanpur	22.6	5.2	48	11.4	58.87
5	Allahabad	20.2	6	37.8	12.9	57.74
6	Ghaziabad	16	8.8	45.7	6.4	55.85
7	Basti	32.8	6	36.5	8.5	54.31
8	Deoria	32.2	6.2	46.7	5.5	54.21
9	Bulandshahar	32.6	2.5	41.6	12.1	53.42
10	Mirzapur	6.5	4.7	40.1	14.8	52.67
61	Shrawasti	49.7	1.4	14.2	3	26.46
62	Auraiya	26.8	2.5	18.8	4.5	24.77
63	Budaun	47.5	1.2	13.8	2.9	24.51
64	Kheri	32.2	1.7	18.2	3.6	22.80
65	Farrukhabad	29.5	1.4	15.9	2.5	17.47
66	Balrampur	32	2	10.6	2	16.66
67	Mainpuri	16.9	1.7	23.2	2.5	16.55
68	Shahjahanpur	33	1.2	11.1	2.3	15.59
69	Rampur	11.8	1	26.6	3.3	15.51
70	Hardoi	16.9	0.9	14.9	1.6	8.24

Thus it is also important to study the utilization pattern of Government health facilities. A composite index incorporating information on indicators like proportion of women received ANC services from Government health services, deliveries conducted at Government institutes and proportion of women sought treatment for pregnancy, post-delivery and RTI/STI (abnormal vaginal discharge) from public health institute. Table 6: shows that utilization of Government health facilities is highest in Lucknow, districts followed Varansi, mau, Meerut, Azamgarh, Baghput, Ballia and Pratapgarh districts. On the other hand, it is worse in Sahajahanpur Unnao

but these are not optimally utilized by people. Instead, people prefer to go to private health care, if they can afford it or they go to practitioner of indigenous methods, who are not qualified such as traditional birth attendant (TBA), local traditional healers who live and work with them. To evaluate the quality of RCH services at district level, a composite index is computed with using information on indicators like proportion of ANC received at home, proportion of women received full ANC (3 ANC visits, 1 TT and 100+ IFA tablets), and women who received post-delivery visit from health worker (ANM/LHV/other health personnel). Table 7 shows that

according to index the quality of care (QCI), the quality of health services are best in Pratapgarh district followed by districts Gorakhpur, jaunpur, Sulatanpur, Allahabad, Ghaziabad, Basti. On the other hand, it is worse in hardoi, Rampur, Sahajahanpur, Mainpur, Balrampur, farrukhabad, Kheri, and Budaun districts. It is also important to notice that most of districts from centaral west region not only have poor utilization of RCH services but the quality of services is also worse in most of these districts.

Conclusion

World wide efforts are being made to provide complete health care, especially to women through the presence of trained birth attendants, provision of emergency obstetric care, helping women to avoid unwanted pregnancy, preventing sexually transmitted infections and addressing other factors contributing to poor health. Both union and state governments in India have taken enormous necessary measures to curb down the higher maternal and child mortalities. In addition to national programmes, Government of Uttar Pradesh also implemented various programme like National Rural Health Mission, Jannini Surkksha Yojana etc. But the maternal and child health status in the state is far below than the national average. There are also gigantic differences among the districts of Uttar Pradesh in respect to social development, reproductive and child health and utilization and quality of services. Different indices show different results but by and large districts like Lucknow, Kanpur Nagar, Varansi, Pratapgarh, Agra, Meerut, Baghpat, Ghaziabad, Saharanpur are better off, while districts Srawasti, Budaun, Barampur, Gonda, Sitapur, Baharaich, Siddharthnagar, Sahjahanpur, Hardoi, Banda are comparatively worst off. Northern and eastern districts not only have poor social-economical development but also have poor health infrastructure. Some social and economically developed districts like Jhansi, Aligarh, Gorakhpur, Etawah, and Moradabad also have worse reproductive health status. Overall, reproductive health and child health is highly and positively association with utilization of RCH services, utilization of Govt. health services and quality of services. It clearly demonstrates that districts that have higher utilization of RCH services, better quality of services also have better reproductive and child health. Thus an improvement in utilization of reproductive and maternal health services will not only reduce the reproductive morbidities, but it will also trim down the child mortality. State Government should focus more on worst performing districts and try to improve the availability and quality of health services. This will help government in reducing the reproductive and maternal morbidities and facilitate reduction in stagnated high infant and child mortalities in the state.

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