



Baseline Findings: Project of 'Improving Sexual, Reproductive Health and Rights Including Maternal and Newborn Health in Bangladesh' in Five Districts



Background of the Study

UNICEF in collaboration with Bangladesh government launched a project “Improving Sexual, Reproductive Health and Rights including Maternal and Newborn Health in Bangladesh” to improve integrated sexual and reproductive health and rights including maternal, newborn, child and adolescent health in 5 districts.

Before implementation of the project a baseline study in 5 project districts (Patuakhali, Rangamati, Sirajganj, Jamalpur and Moulvibazar) with 4 comparison districts (Barguna, Khagrachhari, Lalmonirhat and Sylhet), implemented by UNICEF and conducted by SURCH between 9th May and 18th August 2018

Objectives of the baseline study

Overall objective:

Collect baseline information of study area, living conditions of study population, their knowledge on & practices of key MNCH care and knowledge on adolescent sexual & reproductive health and rights (ASRHR), and other factors affecting health and nutrition of children and women, and to identify gaps between the real need and services in the study districts to design a package of cost-effective intervention in project area.

Specific objectives:

- To design a methodology that would allow the project to estimate the impact of its interventions
- Provide information to make concrete recommendations for improving MNH & ASRHR activities
- Identify coverage of key health, nutrition and adolescent health interventions at district and upazila levels
- Identify impact level indicators, i.e. neonatal & under-5 mortality rates and adolescent fertility rates
- Identify key barriers to access or acquire services in both public and private facilities

Study Methodology

Study Design

Quasi Experimental Design : Pre-Post with Intervention and Comparison areas

5 Intervention (project) districts- Patuakhali, Rangamati, Sirajganj, Jamalpur and Moulvibazar

4 comparison districts- Barguna, Khagrachhari, Lalmonirhat and Sylhet

Quantitative method

- **Household Survey**
- **Health Facility Survey**
- **Health facility mapping by GPS reading**

Qualitative methods

- **Focus Group Discussions (FGD)**
- **Key Informant Interviews (KII)**
- **Review of Documents**

Methodology : Household Survey

Sample Size and Sampling Design

Two stage cluster sampling design was followed

First stage:

78 segments (clusters) with 100 HHs in each, selected following PPS sampling method in each of the project and control districts

Second stage:

Selected 25 HHs per cluster

- Required sample size for each district: 1950 HHs (25 HHs×78 clusters)
- The study targeted 17550 HHs [(1950×5)+(1950×4)] in 9 districts.
- However, successfully covered 17329 households (Project: 9608; Control: 7721)(98.74% completion rate).

Methodology : Health Facility Survey

Public facility:

- District and Upazila levels: All
- Union level: 2 unions per upazila selected randomly, where
 - all government health facilities, i.e. FWCs, upgraded UH&FWCs, RDs, USCs and CCs in the selected unions listed and surveyed.

Private and NGO facilities:

- All private and NGO-run facilities (10+ beds)

**Total - 715 health facilities, Project- 441 and Control- 274
(public 554 +private 161= 715)**

Methodology : Health Facility Survey

Coverage: Public, private and NGO health facilities

- **Medical College Hospitals (MCHs)**
- **District General Hospitals (DGHs)**
- **Maternal and Child Welfare Centers (MCWCs)**
- **Upazila Health Complexes (UHCs)**
- **Upgraded Union Health and Family Welfare Centers (upgraded UH&FWCs)**
- **Family Welfare Centers (FWCs)**
- **Union Sub-Centers (USCs)**
- **Rural Dispensaries (RDs)**
- **Community Clinics (CCs)**
- **Other government facilities (Kalapara 20 Bed, Ullapara 30 Bed & Angorpota-Dahagram 10 Bed Hospitals)**
- **Private hospitals/clinics**
- **NGO-run hospitals/clinics**

Methodology : Health Facility Survey

Gathered data to assess:

- Availability and quality of health facilities
- Health services including key MNH and SRHR including FP service and
- Capacity of service providers at community and facility levels

Techniques applied:

- Review of records
- Observations
- Interview with service providers/key officials
- GPS reading based mapping of health facilities and services for GIS

Methodology : GPS reading for GIS

Public facility:

- All facilities at district, upazila and union levels

Private and NGO facilities:

- All private and NGO-run facilities

**GPS reading of all health facilities in project and comparison areas-
Except 40 facilities (mainly in Rangamati & Khagrachhari) due to lack of
uninterrupted internet connectivity**

Total- 675 health facilities

Methodology : Qualitative Methods

20 Focus Group Discussions (FGD) with

- Husbands and mothers-in-law of community women
- members of Community Groups (CGs) and Community Support Groups (CSGs)

30 Key informant interviews (KII) with

- Civil Surgeons
- Superintendents
- Deputy Directors of Family Planning (DDFP)
- UH&FPO , UFPO and RMO

And Document Review

Household Survey Findings

Household Population

Household composition

Percent distribution of households by sex of household heads and household size		
Characteristics	Percent	
	Project area	Comparison area
Sex of household heads		
Male	89.2	87.2
Female	10.8	12.8
Total	100.0	100.0
Household size		
Average (mean) number of household members	4.5	4.6
n (number of households)	9608	7721

Findings: Mostly male headed households: Project 89.2%, Control 87.2%

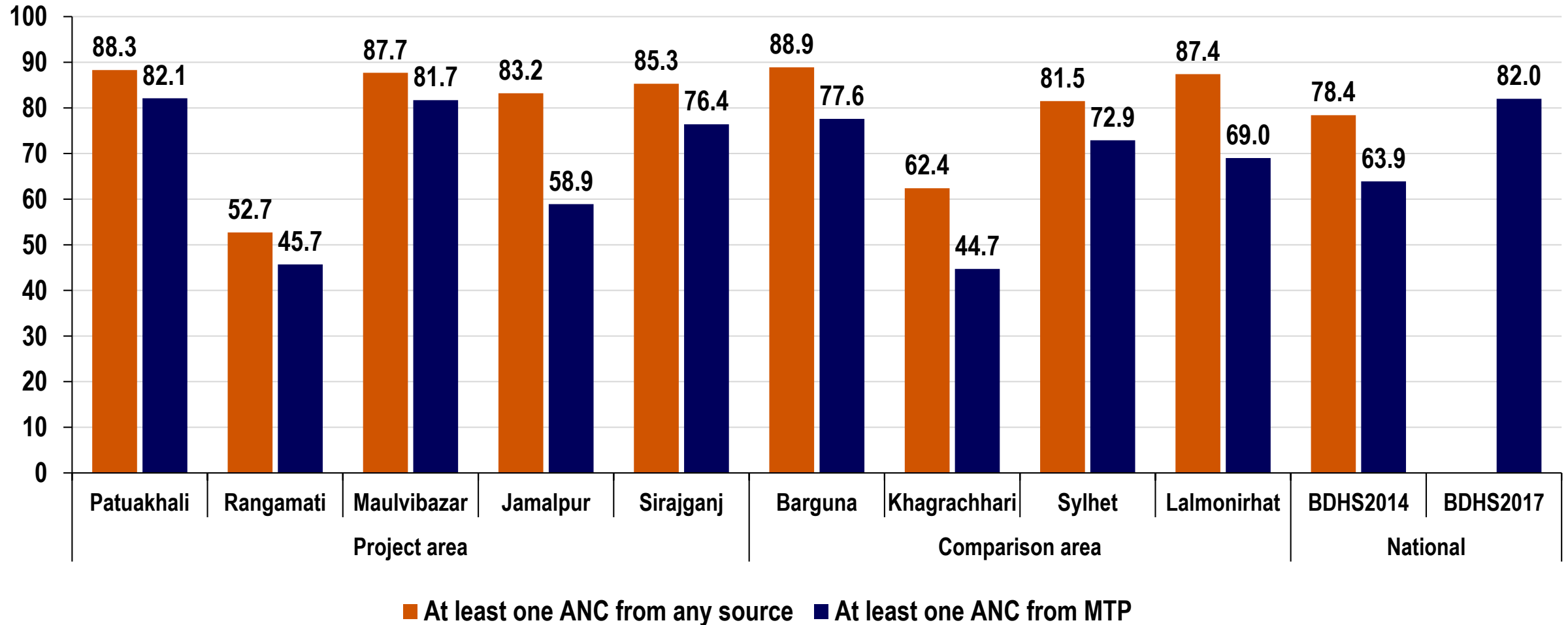
Average number of household members: Project 4.5, Control 4.6, nationally: 4.5 persons (BDHS 2014)

Maternal Care

(of women age 15-49 years with a live birth
in last two years prior to survey)

Antenatal care (at least one ANC from any source or from MTP)

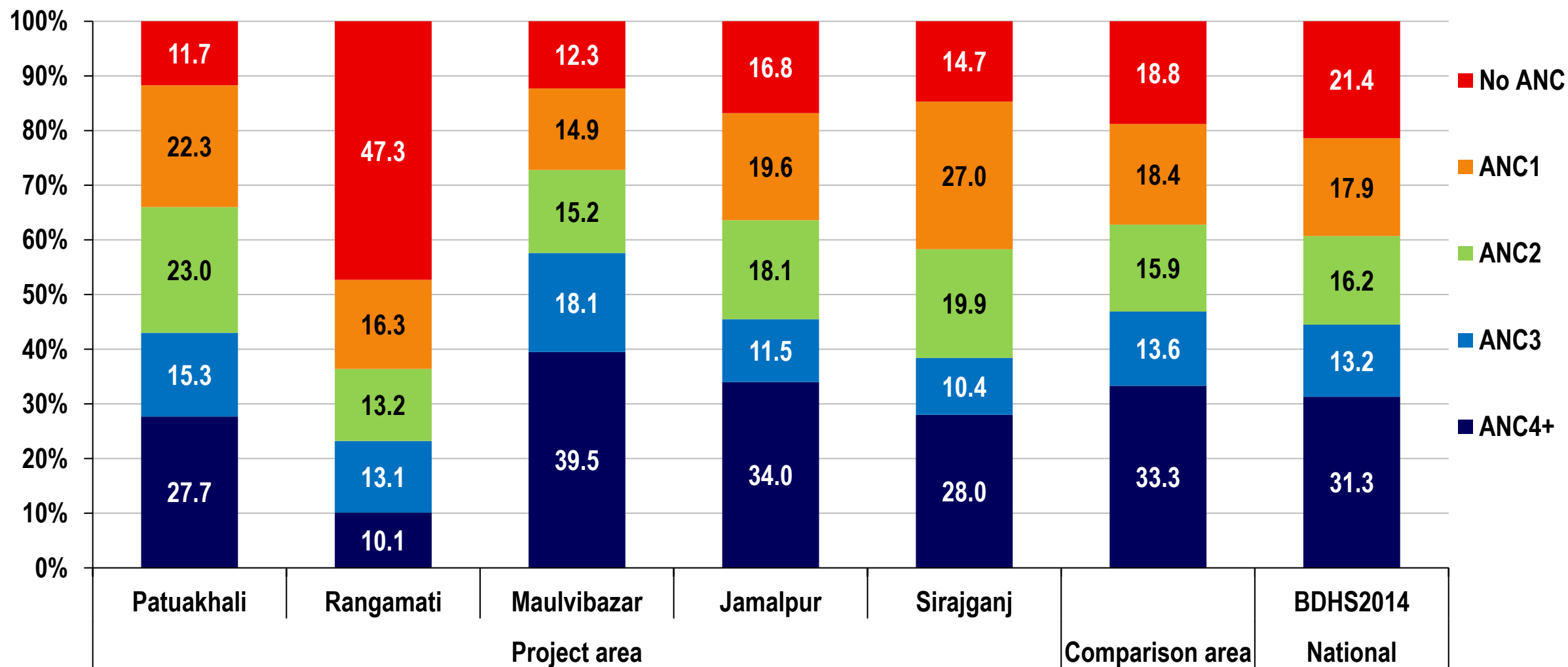
Antenatal Care



Note: Medically trained provider (MTP) includes qualified doctor, nurse, midwife, paramedics, sub assistant community medical officer, family welfare visitor and community skilled birth attendant

Number of ANC visits to any provider

Antenatal Care

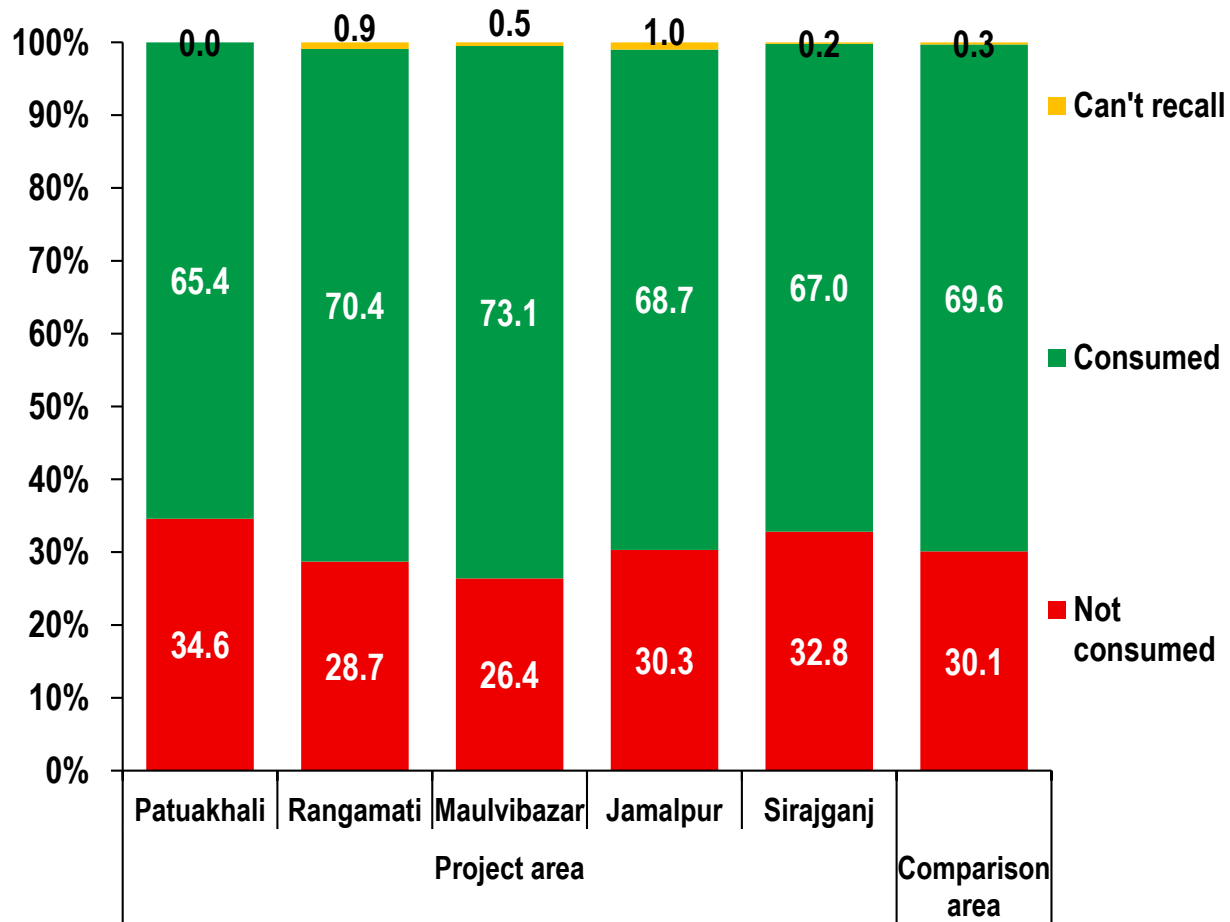


4+ ANC: Nationally 47% according to BDHS2017

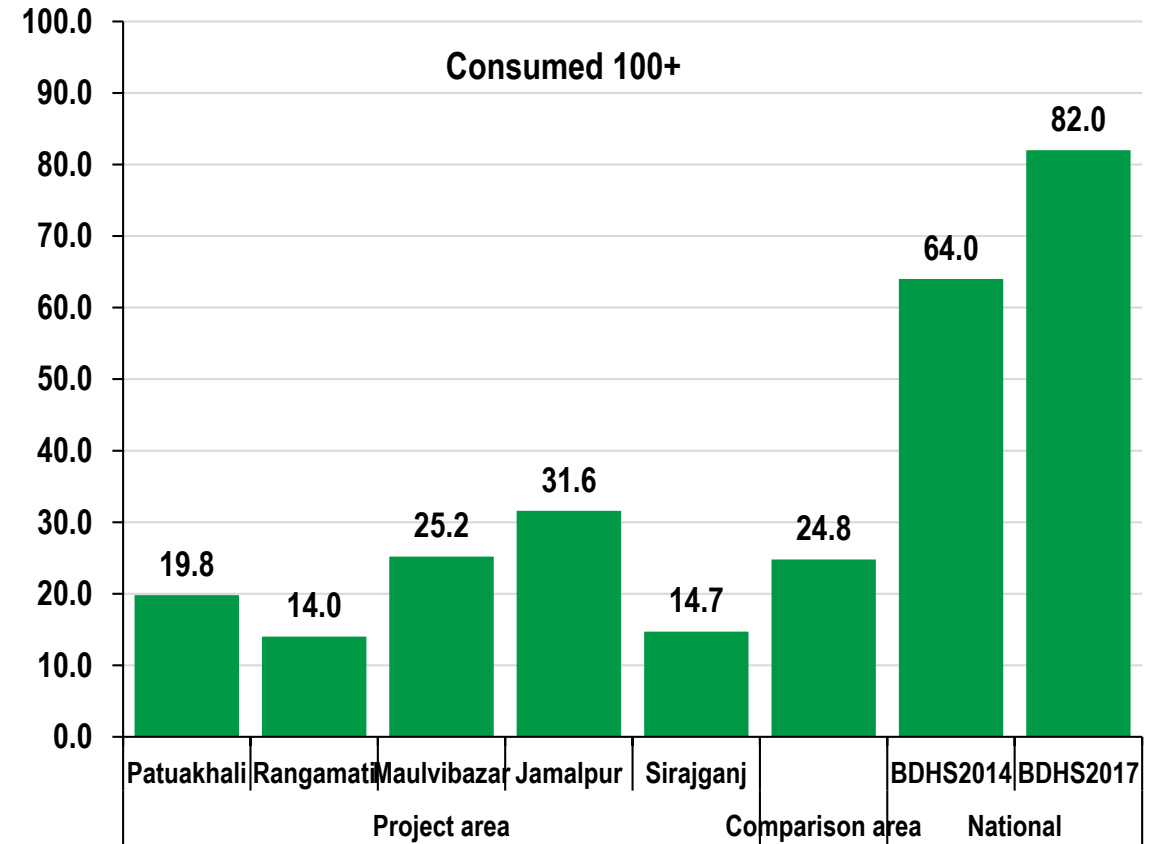
Consumption of IFA supplements

Antenatal Care

Consumed or not consumed

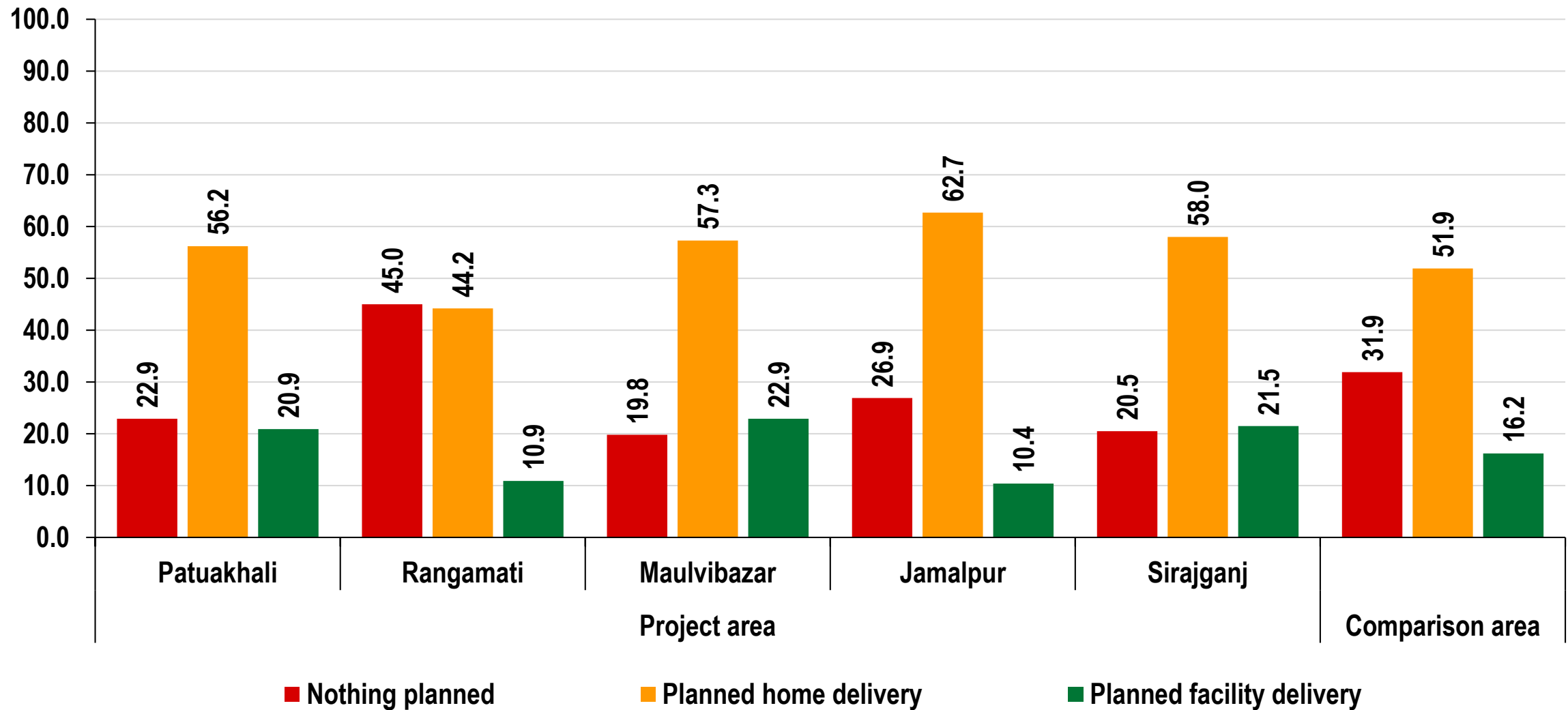


Consumed 100 or more

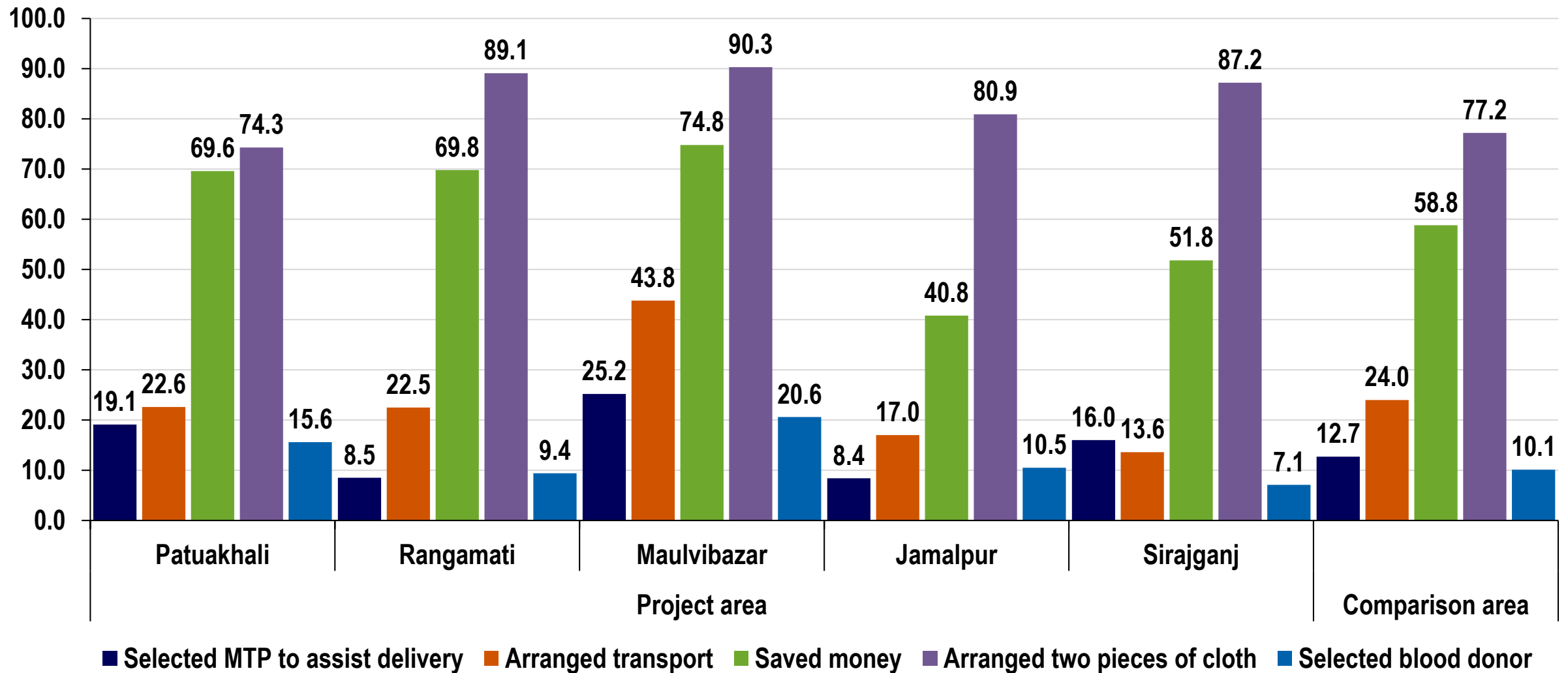


Birth preparedness (plan for place of delivery: home or facility or no plan)

Birth preparedness



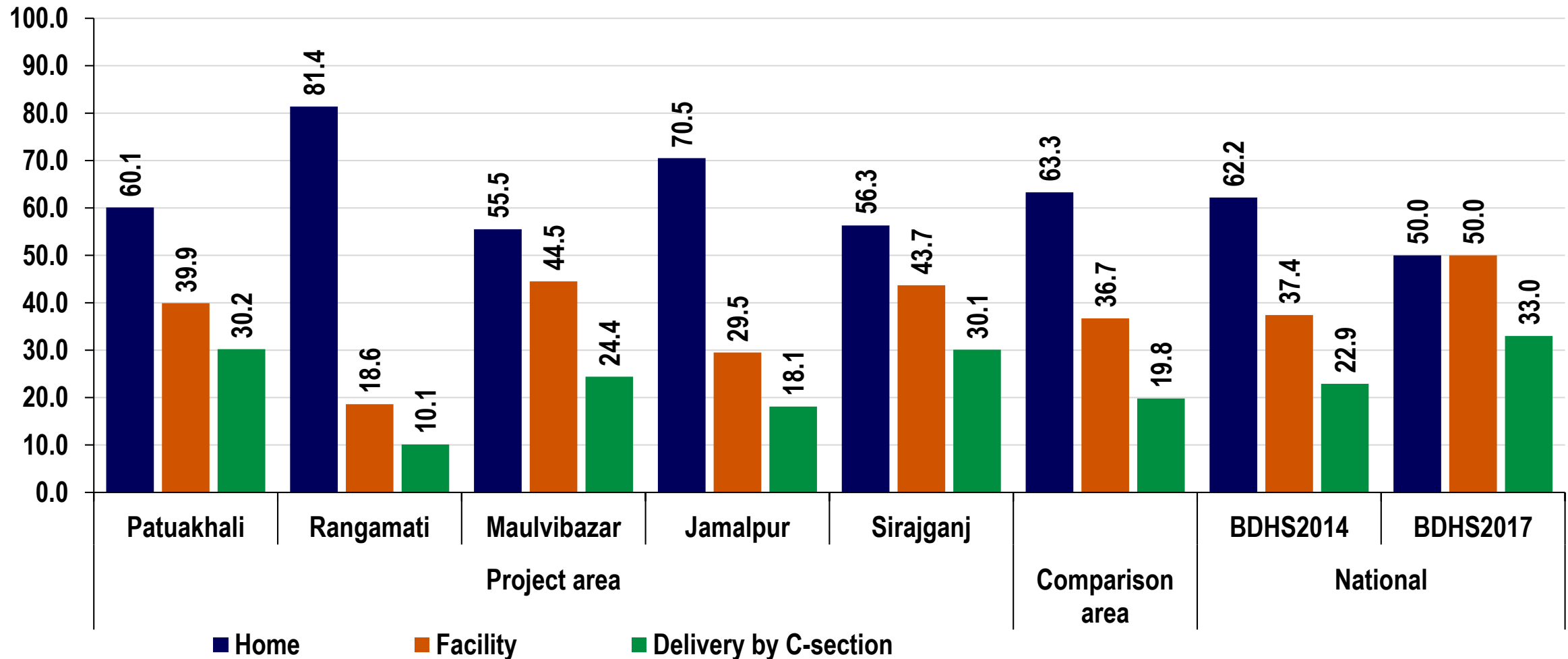
Birth preparedness (MTP to assist delivery, transport, money, cloth, blood donor)



MTP includes qualified doctor/nurse/SACMO/paramedic/MA/FWV/CSBA/midwife

Place of last delivery, and delivery by C-section

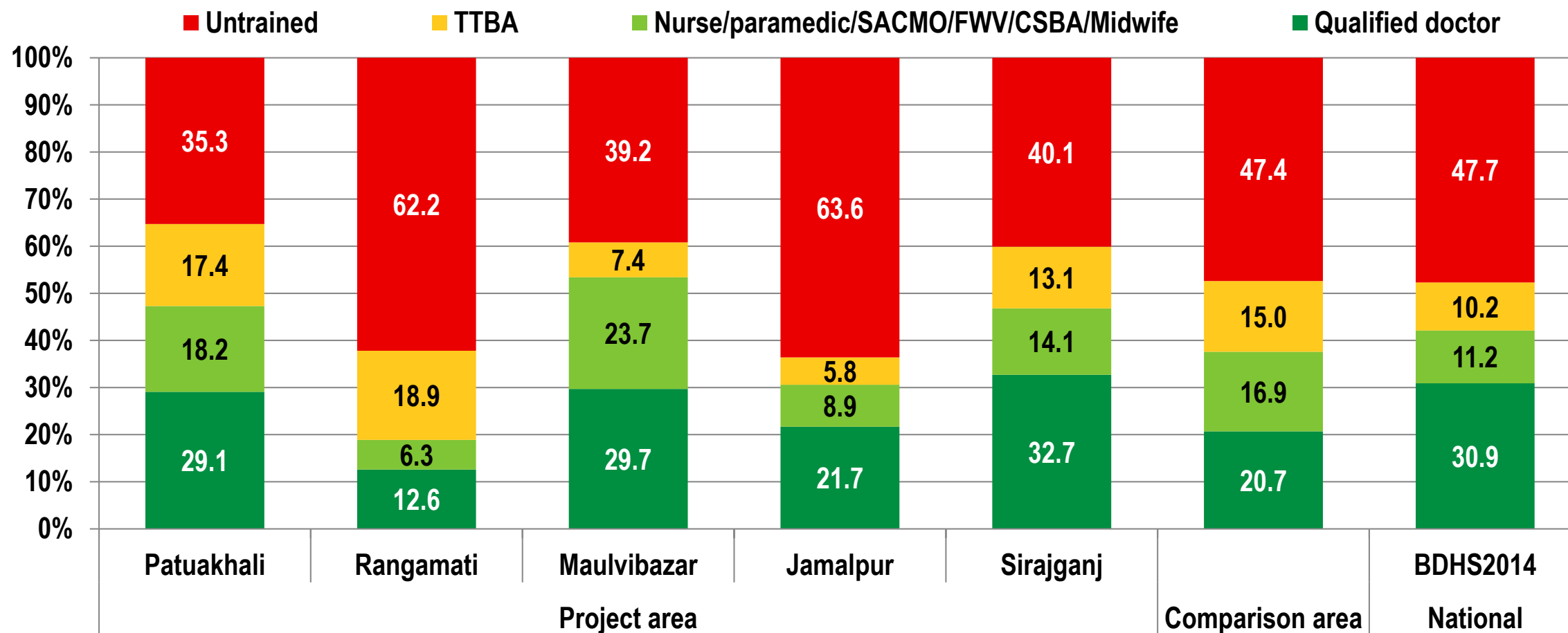
Delivery Care



Facility delivery includes deliveries at public, private and NGO-run facilities

Delivery assisted by

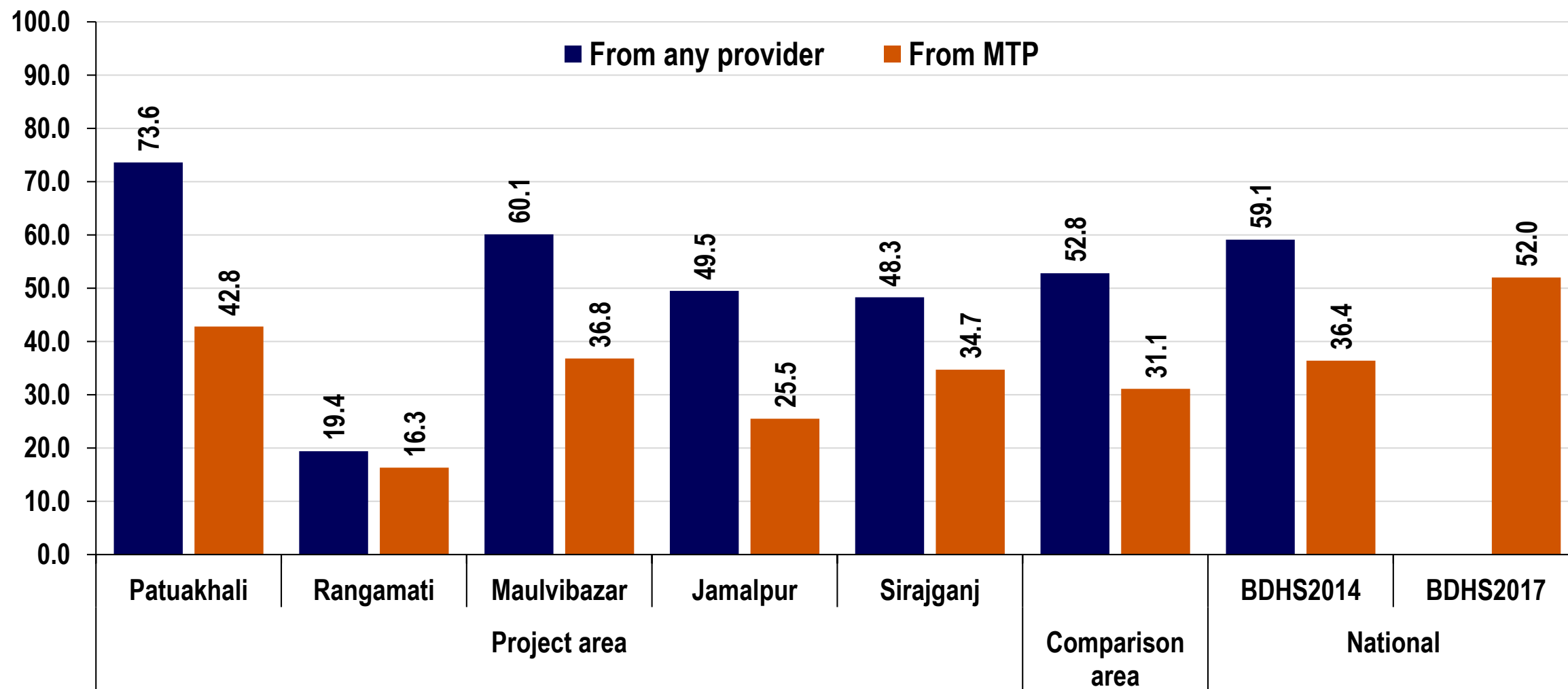
Delivery assisted by



Nationally (BDHS2017-18: qualified doctor-38%, Nurse/paramedic/SACMO/FWV/CSBA- 14%)

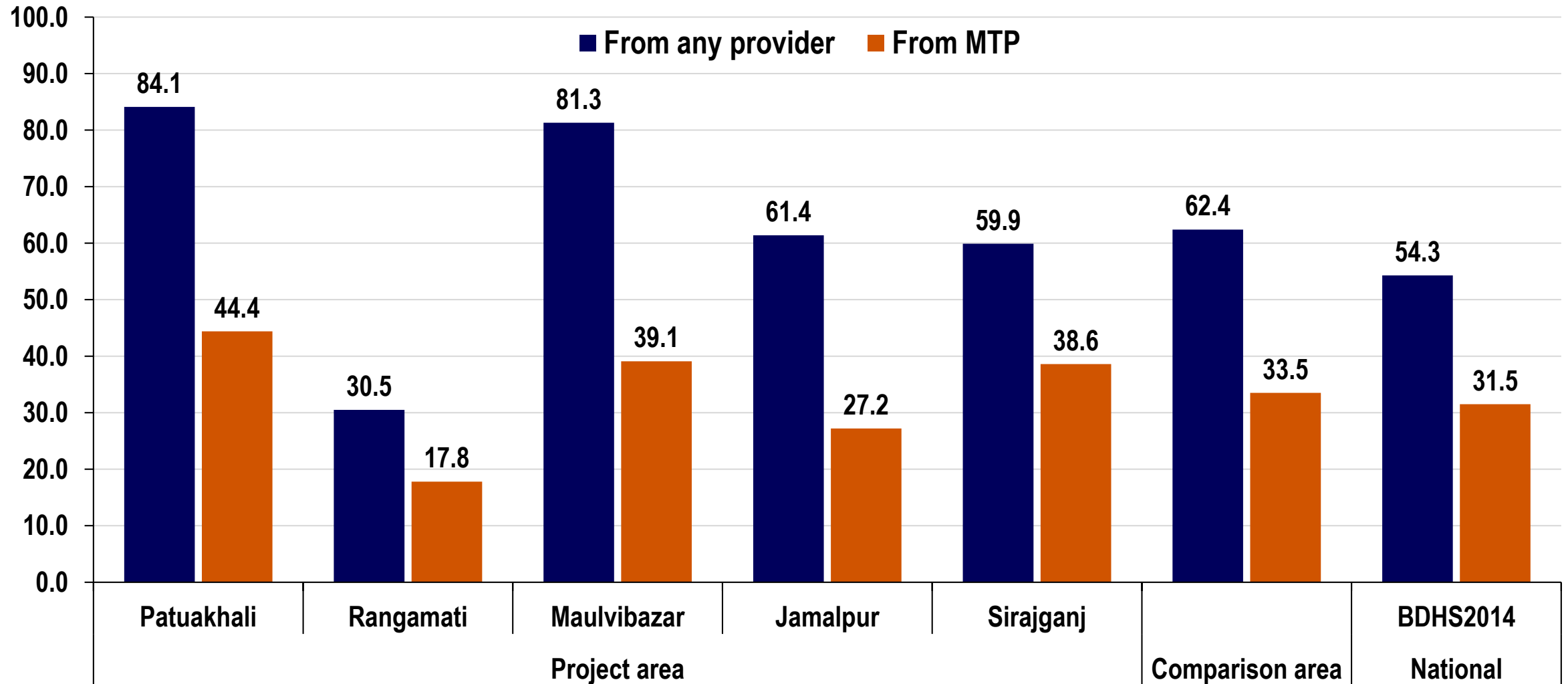
PNC for mothers in 2 days of delivery

Postnatal care

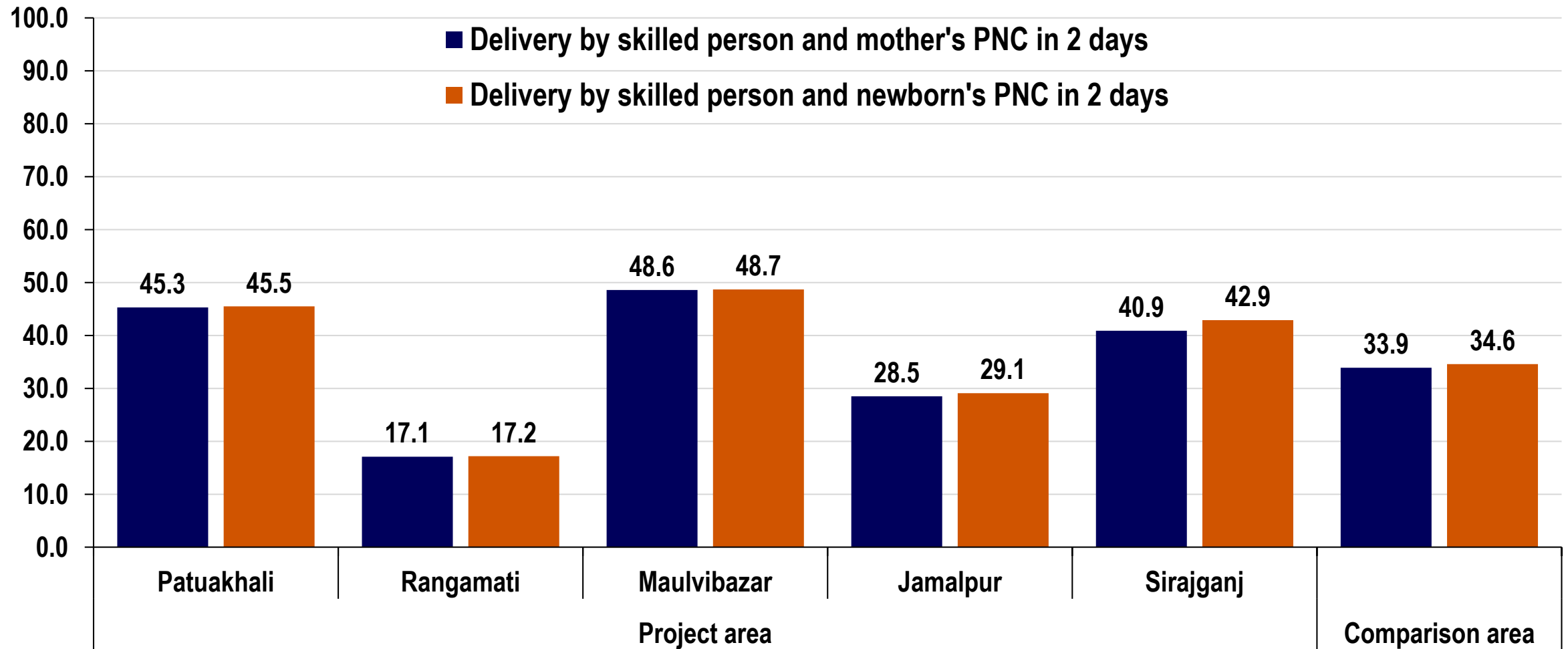


PNC for newborn in 2 days of birth

Postnatal care

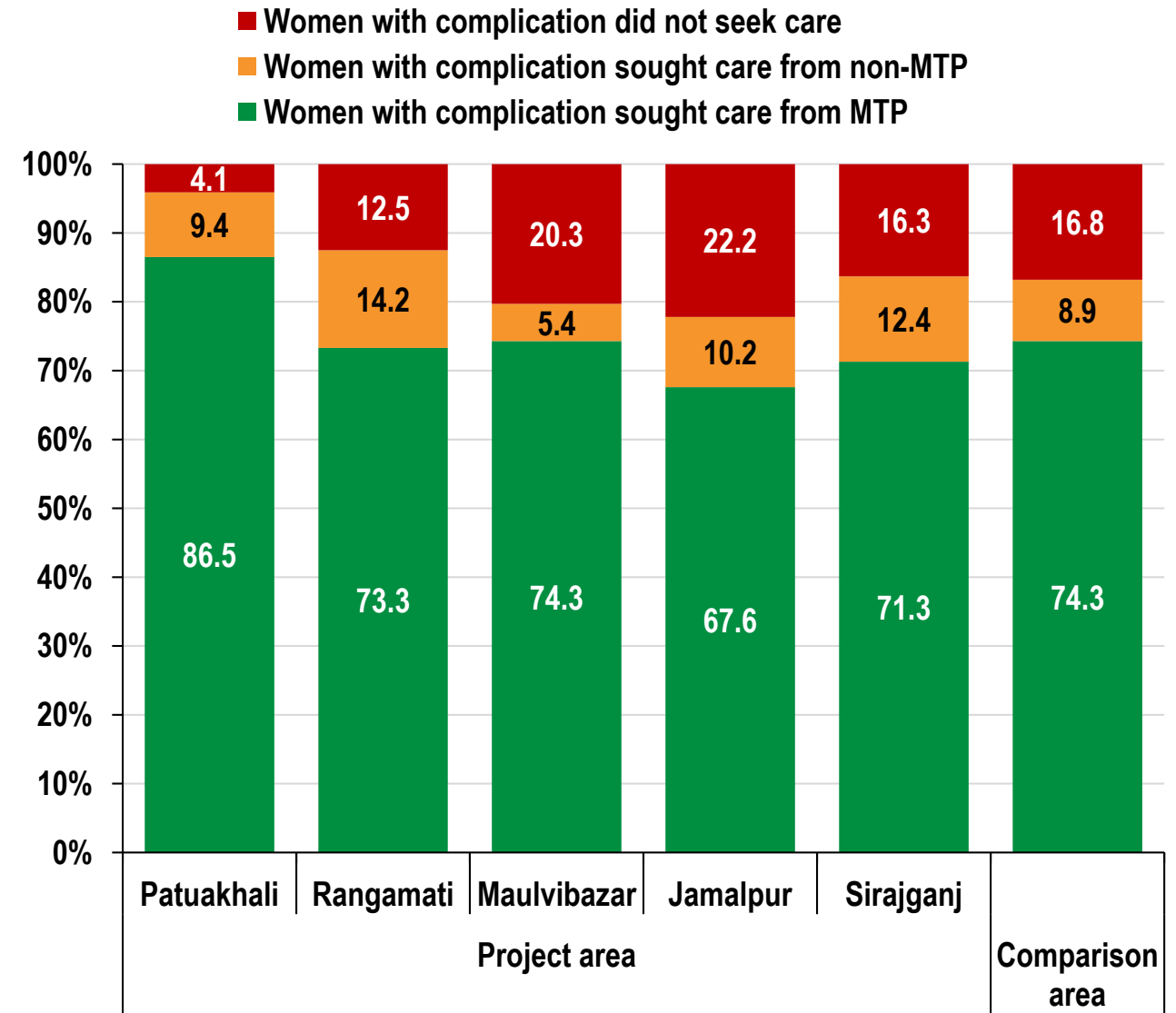
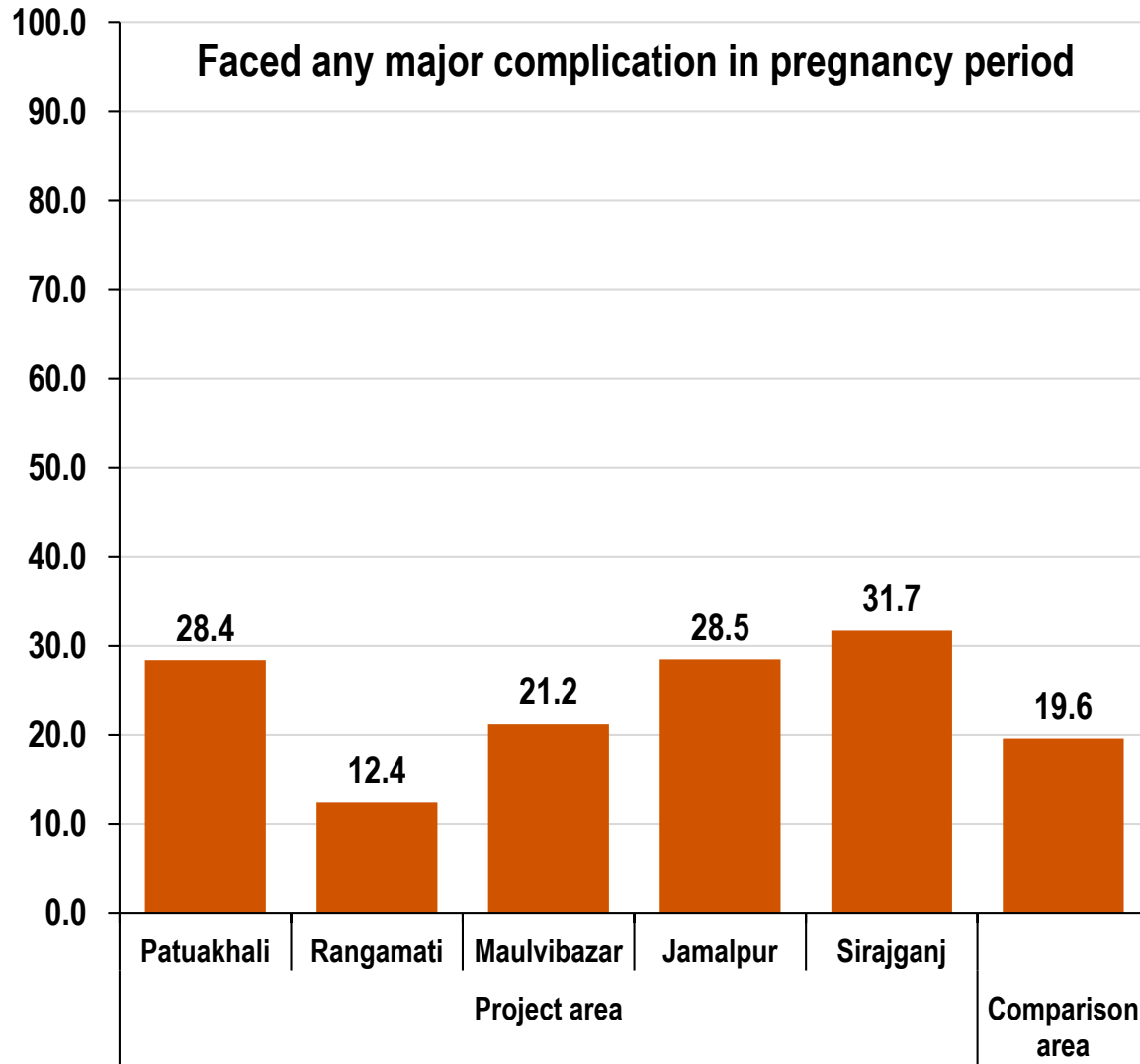


Delivery by skilled person with mothers'/newborn's PNC within 2 days after birth

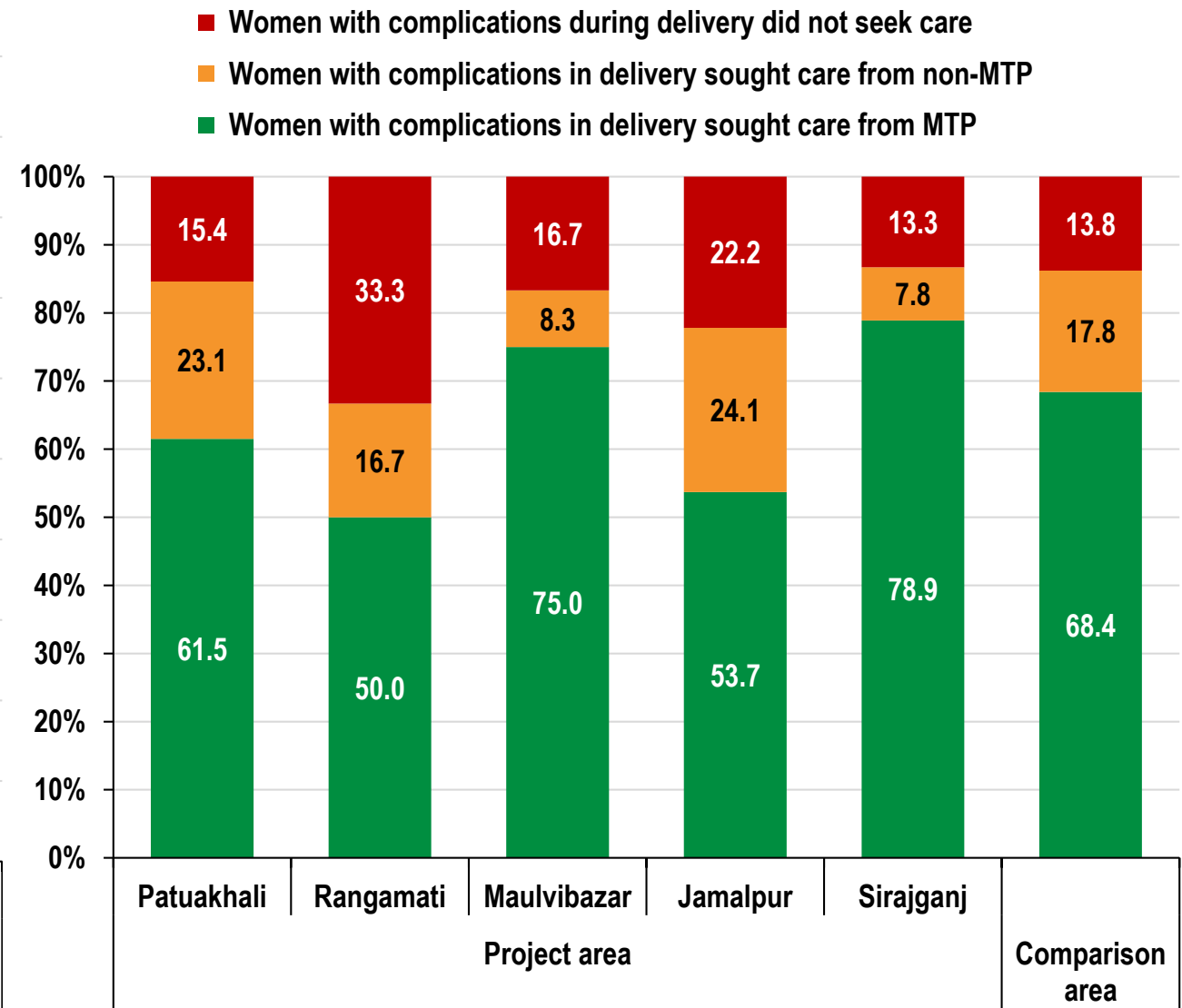
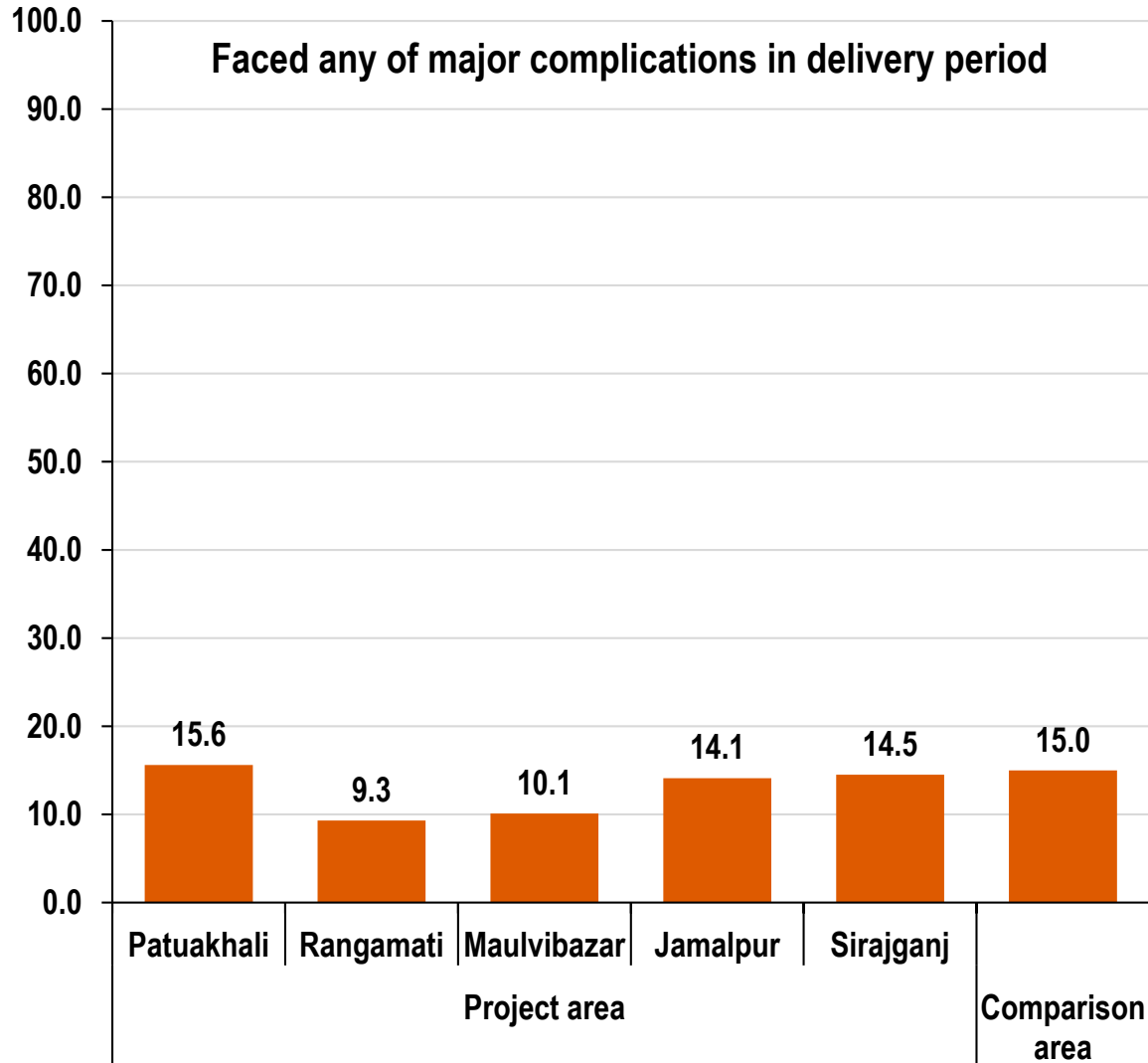


Skilled person: qualified doctor, nurse, paramedic, FWV, CSBA and midwife

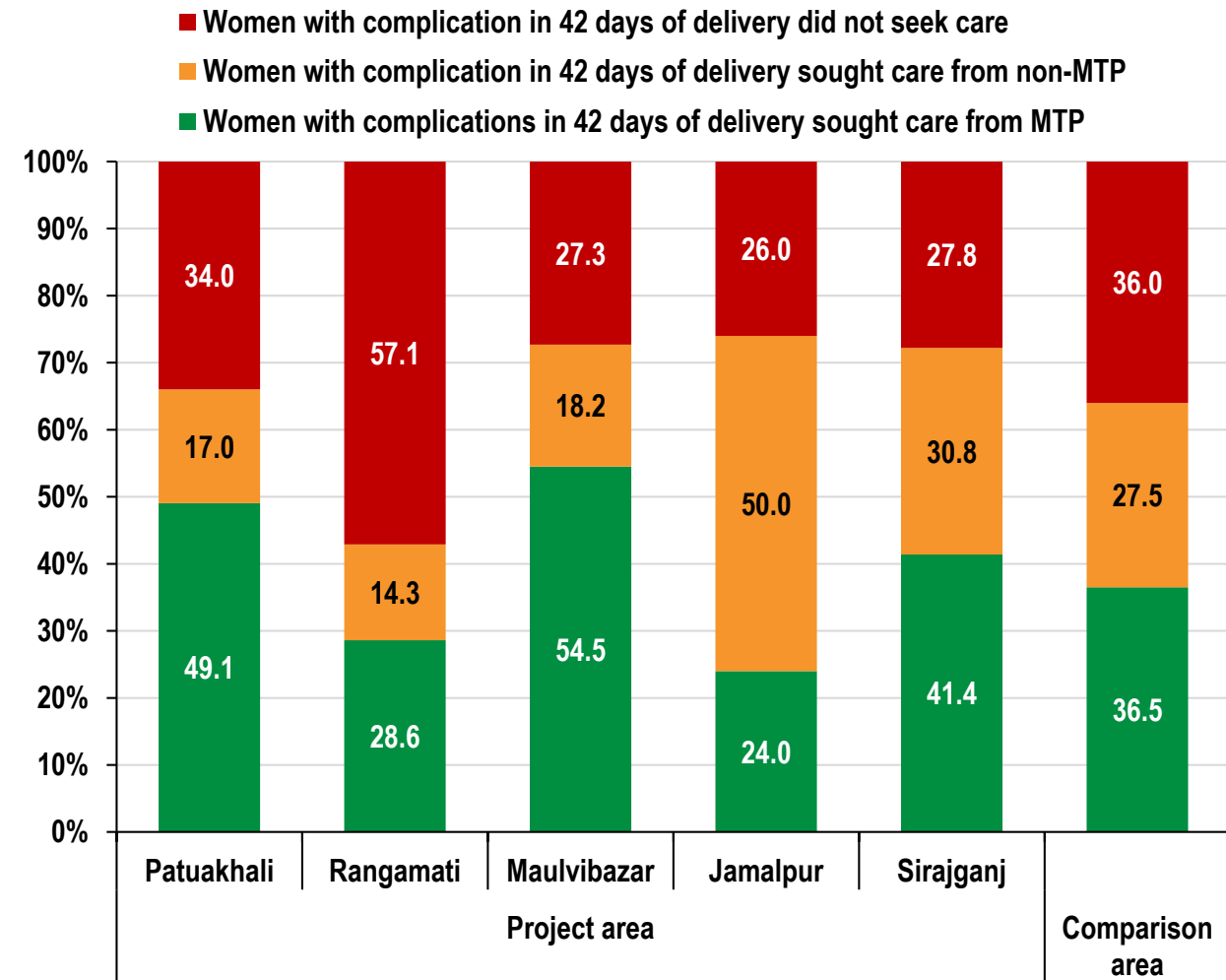
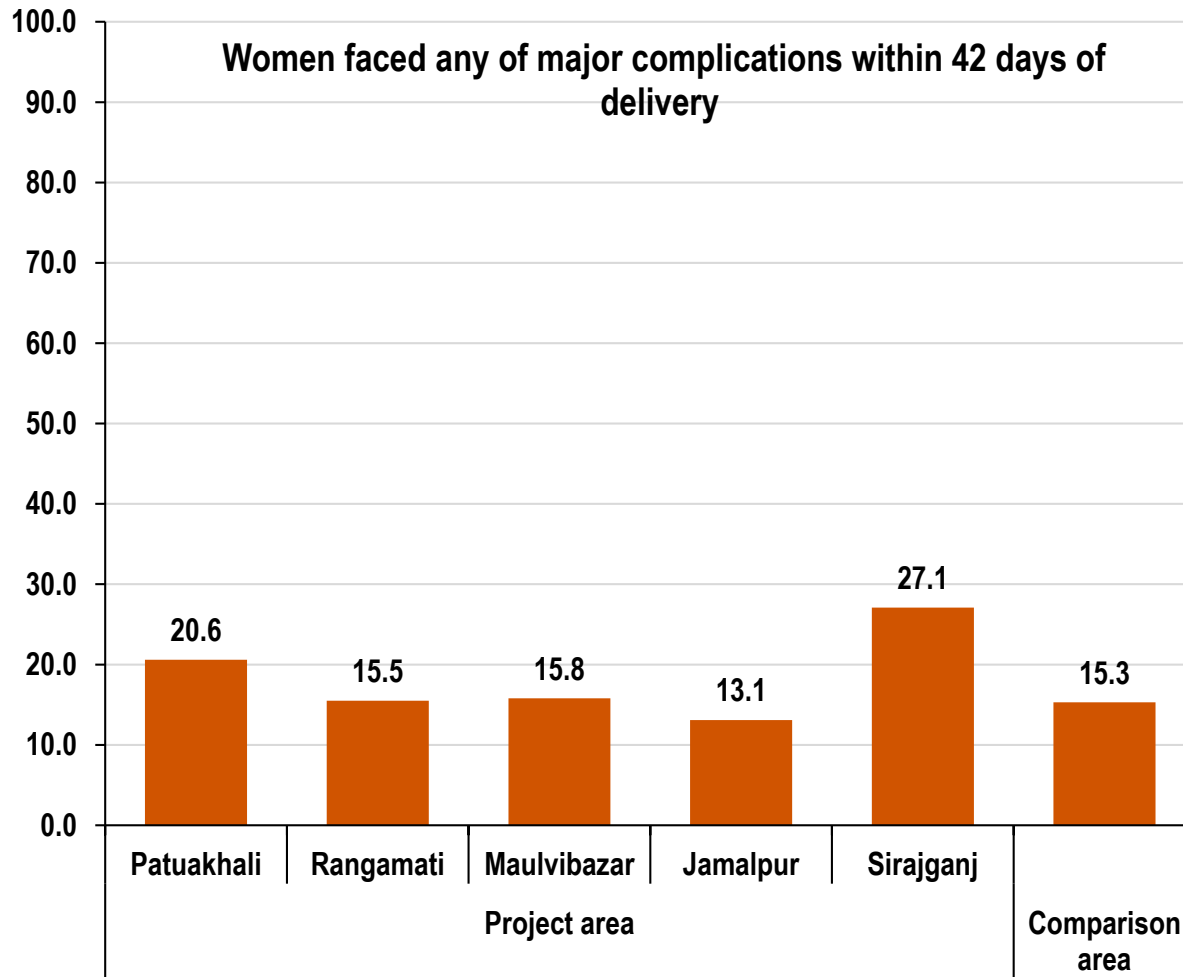
Major maternal complications in ANC/pregnancy period & care seeking for complications



Facing major maternal complications during delivery & care seeking for complications



Facing major complications within 42 days of delivery and care seeking behavior



Nationally complication after delivery: 21% (BMMS 2016)

Knowledge on danger signs during pregnancy period

Danger sign knowledge

Areas	Districts	Excessive vaginal bleeding	High fever	Convulsion/fit	Severe abdominal pain	Headache and/or blurred vision	Know 3+ danger signs
Project area	Patuakhali	29.7	25.3	47.3	24.5	53.9	22.2
	Rangamati	19.9	36.9	16.8	40.0	51.3	23.3
	Maulvibazar	36.9	31.1	33.3	26.1	49.2	22.3
	Jamalpur	33.3	29.5	71.5	38.7	52.9	43.2
	Sirajganj	41.4	24.7	42.6	40.0	51.2	29.9
Comparison area		35.7	35.2	43.2	31.7	61.9	35.9

Knowledge on danger signs during delivery period

Danger sign knowledge

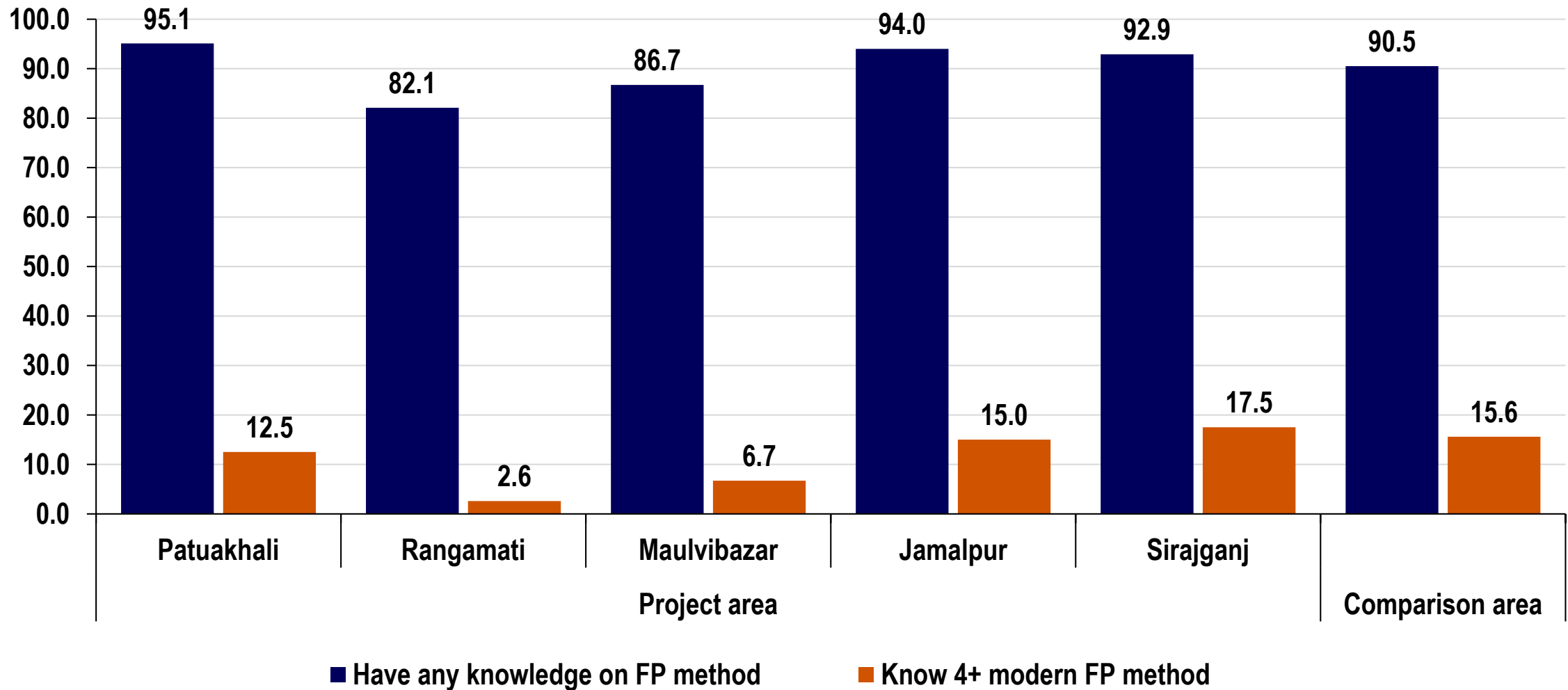
Areas	Districts	Prolonged labour pain (for 13+ years)	Retained placenta	Premature rupture of membranes	Convulsion/ un-consciousness	Baby's hands and feet come first	Excessive vaginal bleeding	Know 3+ danger signs
Project districts	Patuakhali	18.9	22.6	17.4	41.0	15.7	24.9	8.1
	Rangamati	18.6	11.0	0.8	11.3	8.0	17.0	1.6
	Maulvibazar	24.5	7.0	2.9	25.9	7.7	32.9	0.3
	Jamalpur	23.0	34.1	0.4	65	28	33.6	13.6
	Sirajganj	26.8	20.9	4.4	42.6	17.7	32.7	6.1
Comparison districts		33.2	19.1	9.1	33.2	26.2	27.1	11.0

Knowledge on danger signs immediately after delivery

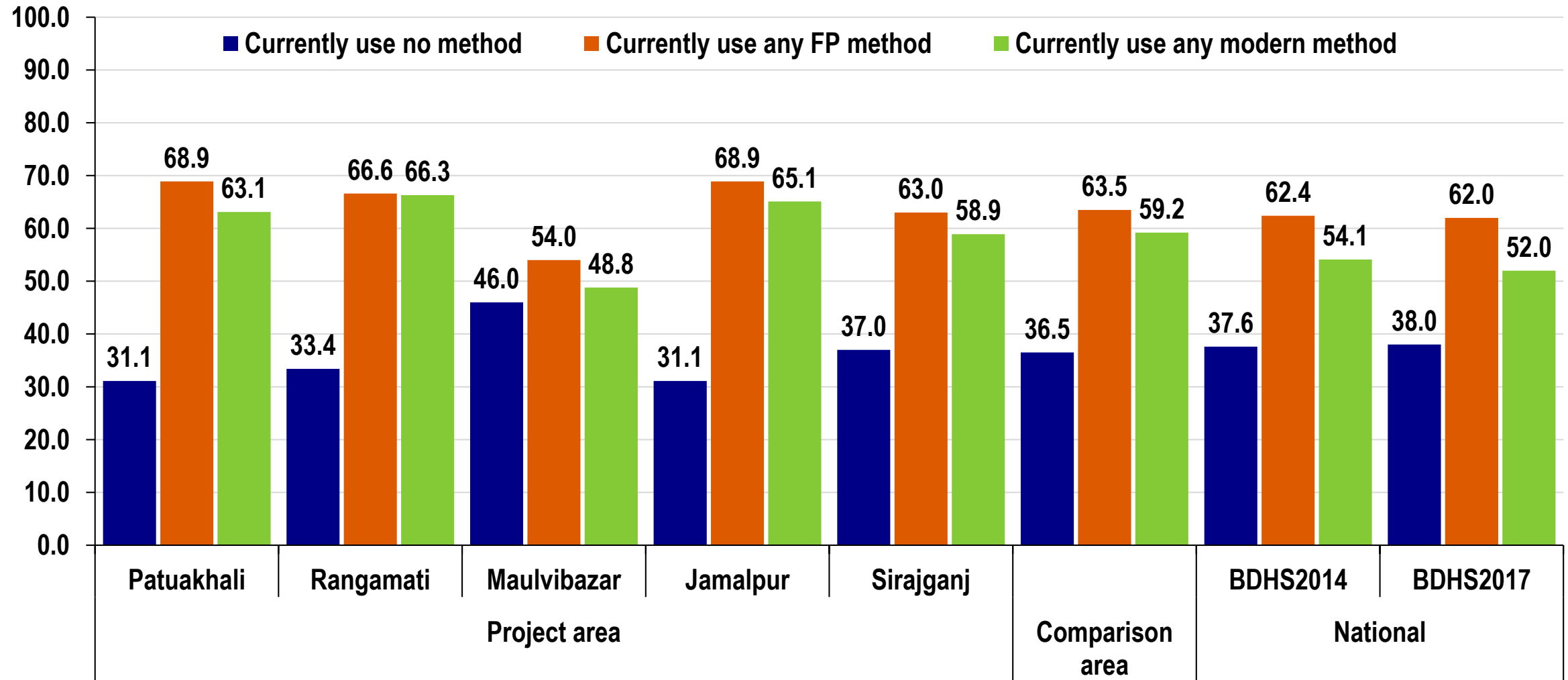
Danger sign knowledge

Areas	Districts	Headache/ blurry vision/ high blood pressure	Edema in face/leg	Convulsion /shivering	High fever	Excessive vaginal bleeding	Severe lower abdominal pain	Difficulty in breathing	Faint /senselessness	Know 3+ danger signs
Project area	Patuakhali	23.2	43.4	54.1	25.7	23.5	21.6	13.7	12.1	36.6
	Rangamati	33.9	15.3	14.5	26.9	12.5	31.9	11.5	4.8	31.0
	Maulvibazar	23.7	13.5	27.0	28	23.9	26.8	13.7	3.8	23.9
	Jamalpur	24.5	24.7	79.8	30.5	28.4	34.3	12.0	10.3	50.8
	Sirajganj	31.5	18.9	46.6	30.2	31.9	34.9	22.0	11.7	46.0
Comparison area		28.8	27.1	39.3	32.1	27.0	27.1	14.3	11.7	45.1

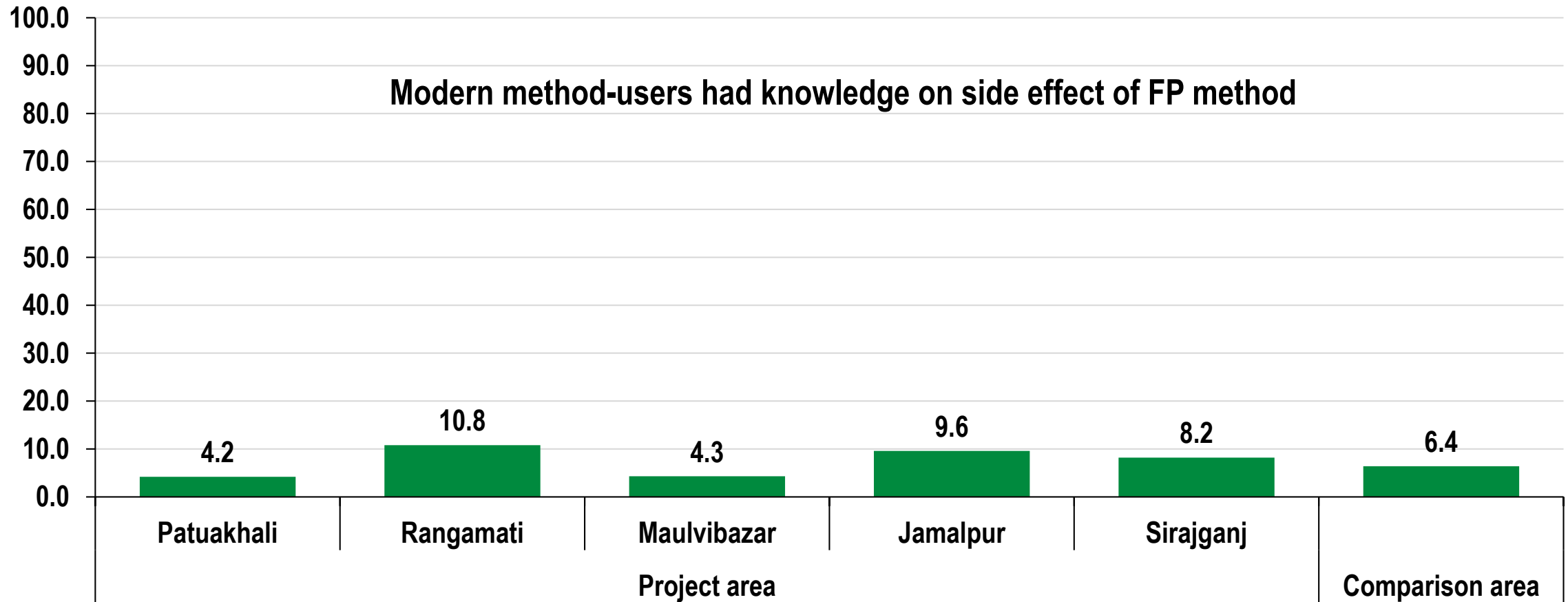
Knowledge on any FP method and 4+ modern methods



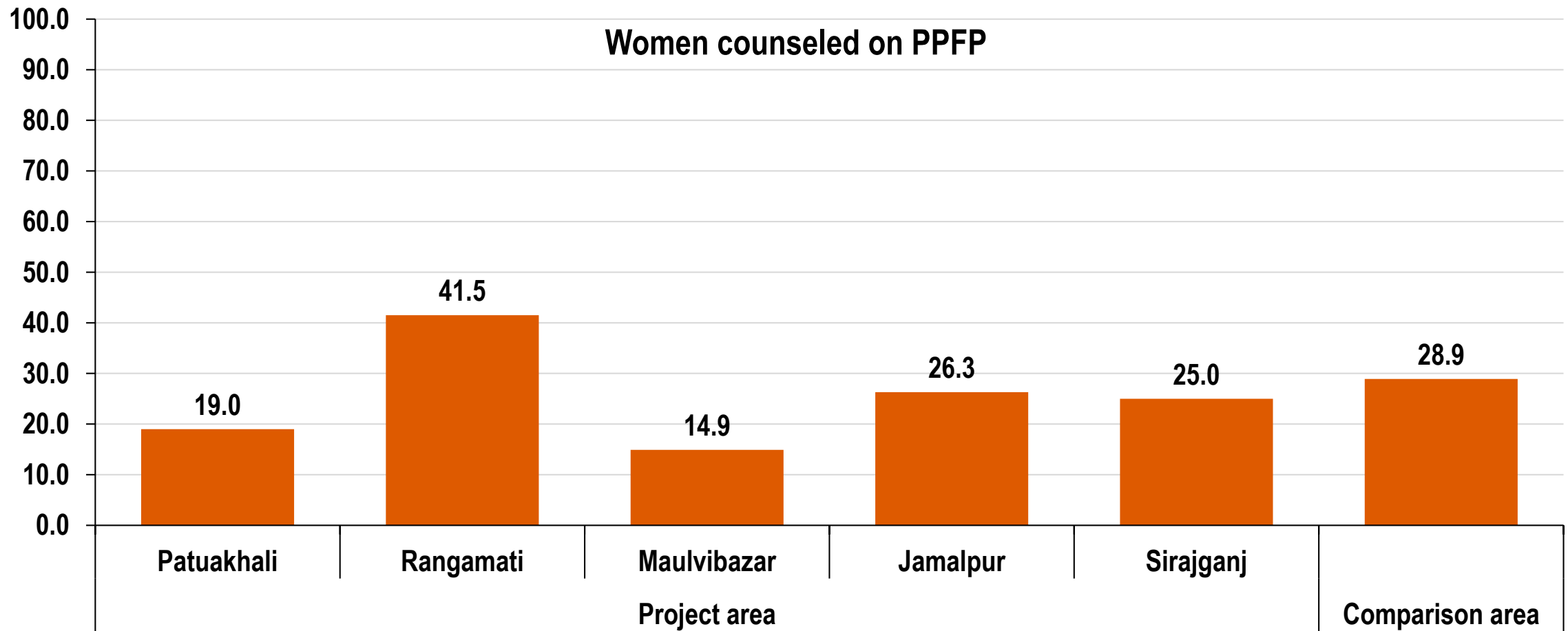
Current prevalence of any FP method and modern FP method



Modern method-users' knowledge on side effects of FP methods

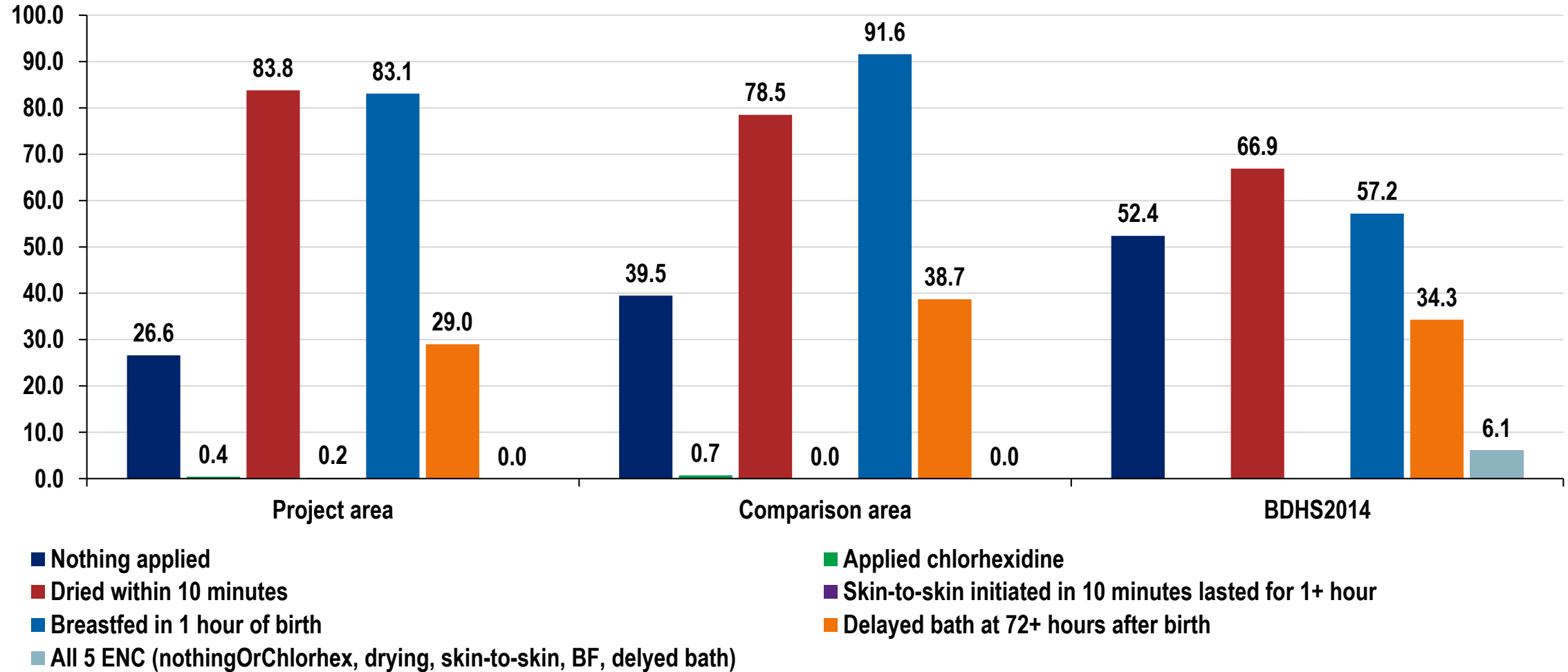


Women counseled on PFP



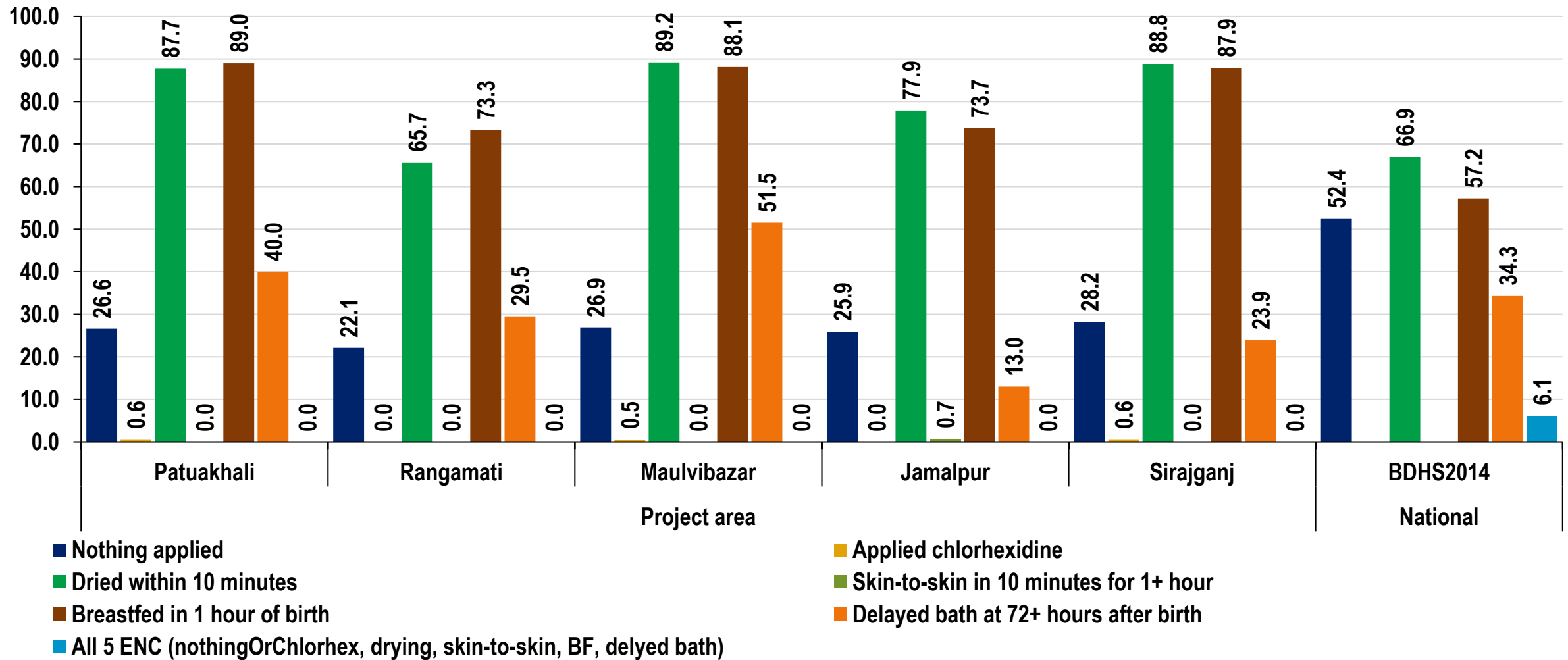
Neonatal Healthcare Practices

Essential Newborn Care by area



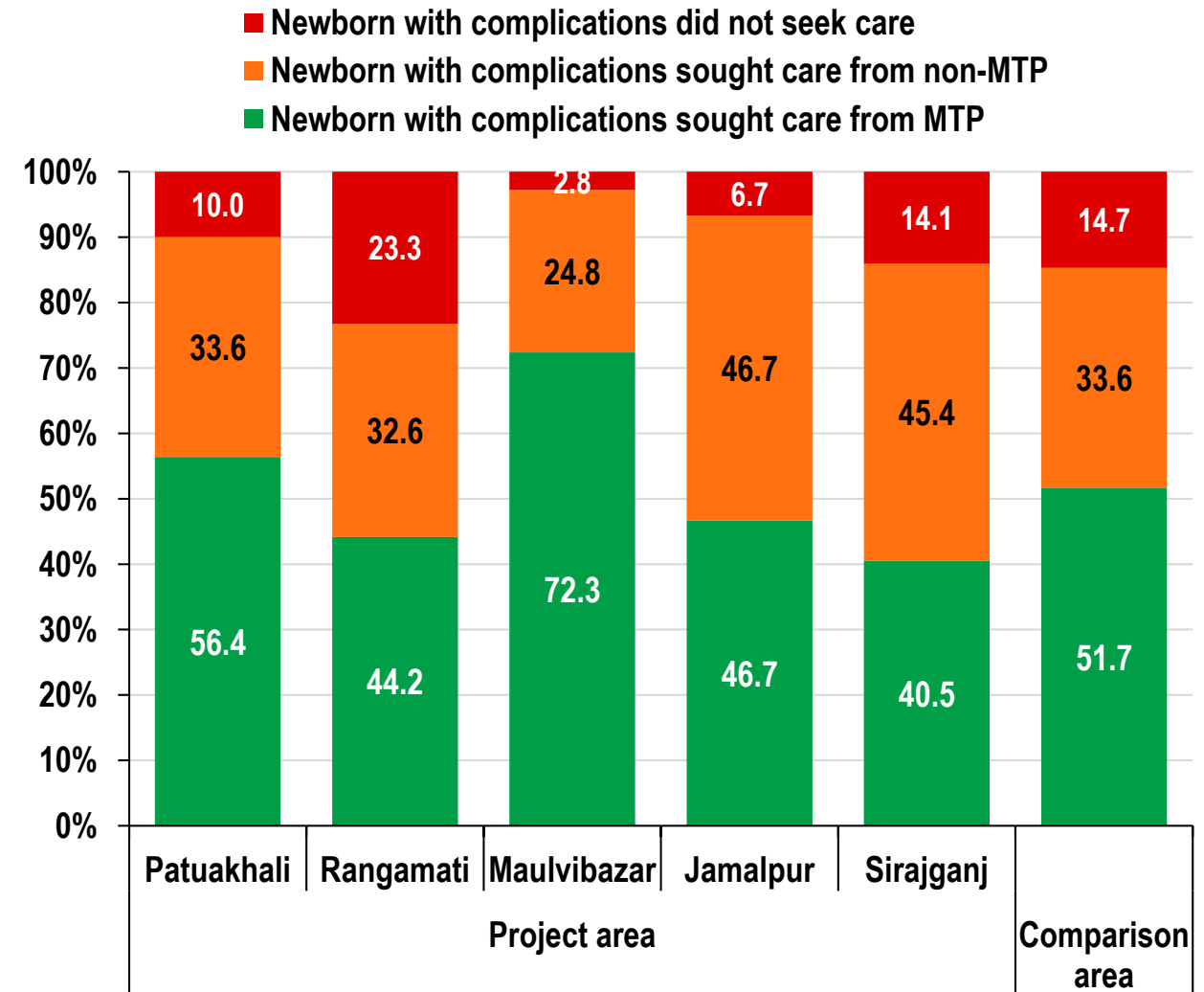
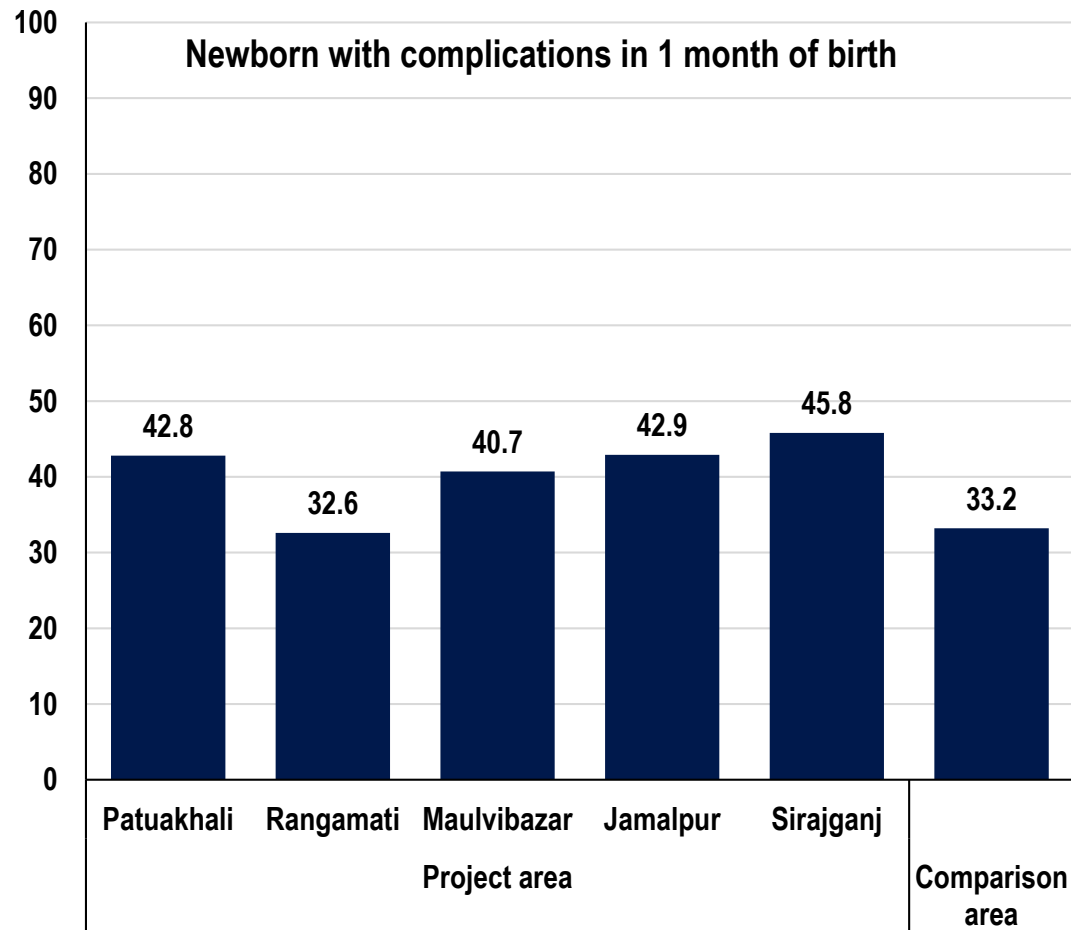
According to BDHS 2014: dried within 0-4 minutes; all ENC refers to instrument boiled before cord cutting, drying in 0-4 minutes, nothing applied, delayed bath at 72+ hours and immediate breastfeeding in 1 hour

Essential Newborn Care by district



According to BDHS 2014: dried within 0-4 minutes; all ENC refers to instrument boiled before cord cutting, drying in 0-4 minutes, nothing applied, delayed bath at 72+ hours and immediate breastfeeding in 1 hour

Newborn with complications in 1 month after birth and care seeking behavior



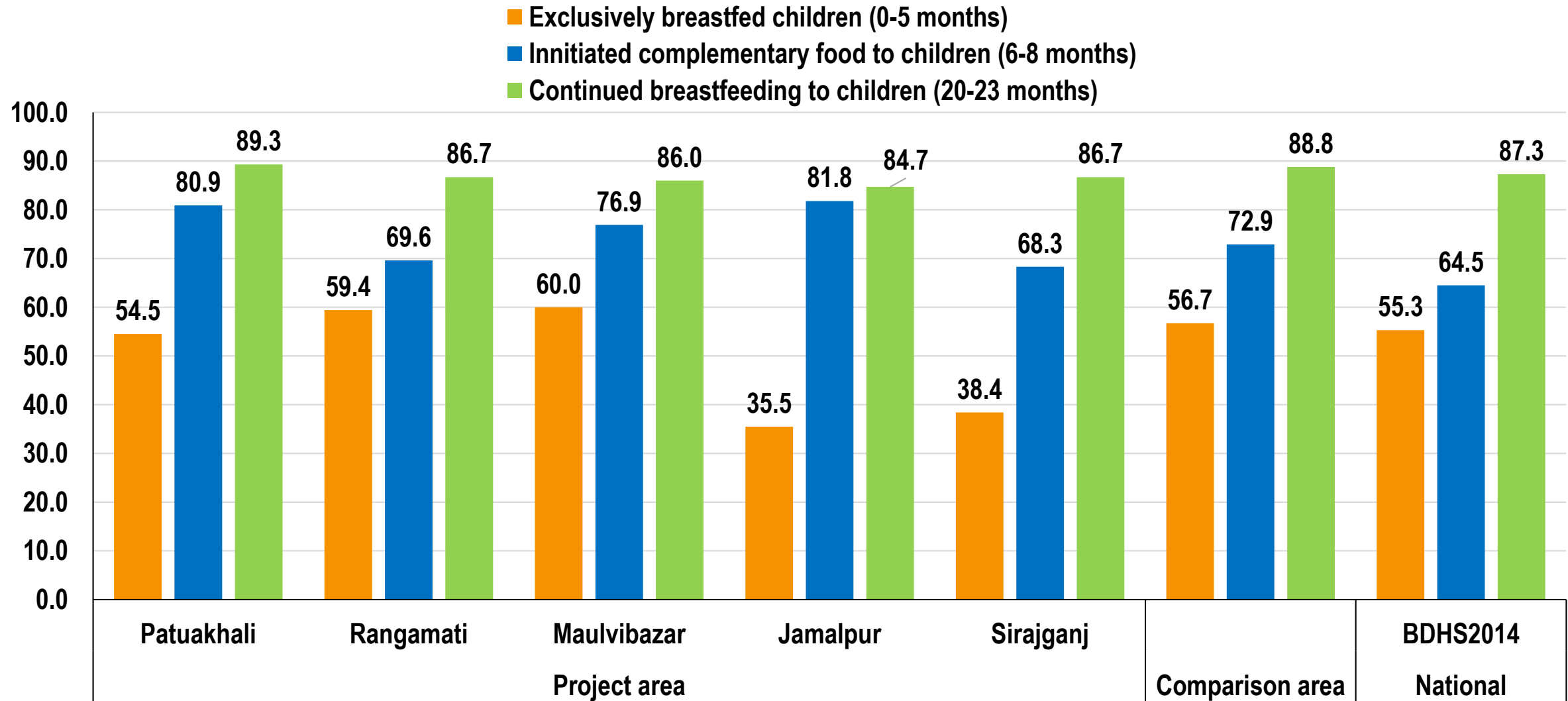
Mothers'/Caretaker's knowledge on newborn danger signs

Areas	Districts	Difficult/fast breathing	Pneumonia	Poor sucking	Convulsion/shivering	Feel fever/cool	Lethargy	Know 3+ danger signs
Project area	Patuakhali	28.4	69.4	5.0	12.7	43.0	2.2	14.3
	Rangamati	19.5	38.8	15.1	3.1	27.6	1.5	14.7
	Maulvibazar	16.3	48.6	6.8	2.8	55.9	0.7	7.2
	Jamalpur	24.1	75.0	11.6	28.4	46.7	1.6	23.8
	Sirajganj	24.4	70.0	5.3	10.7	49.1	3.5	16.3
Comparison area		33.3	65.3	12.7	15.9	36.7	2.8	22.5

Infant and Young Child Feeding (IYCF) Practices

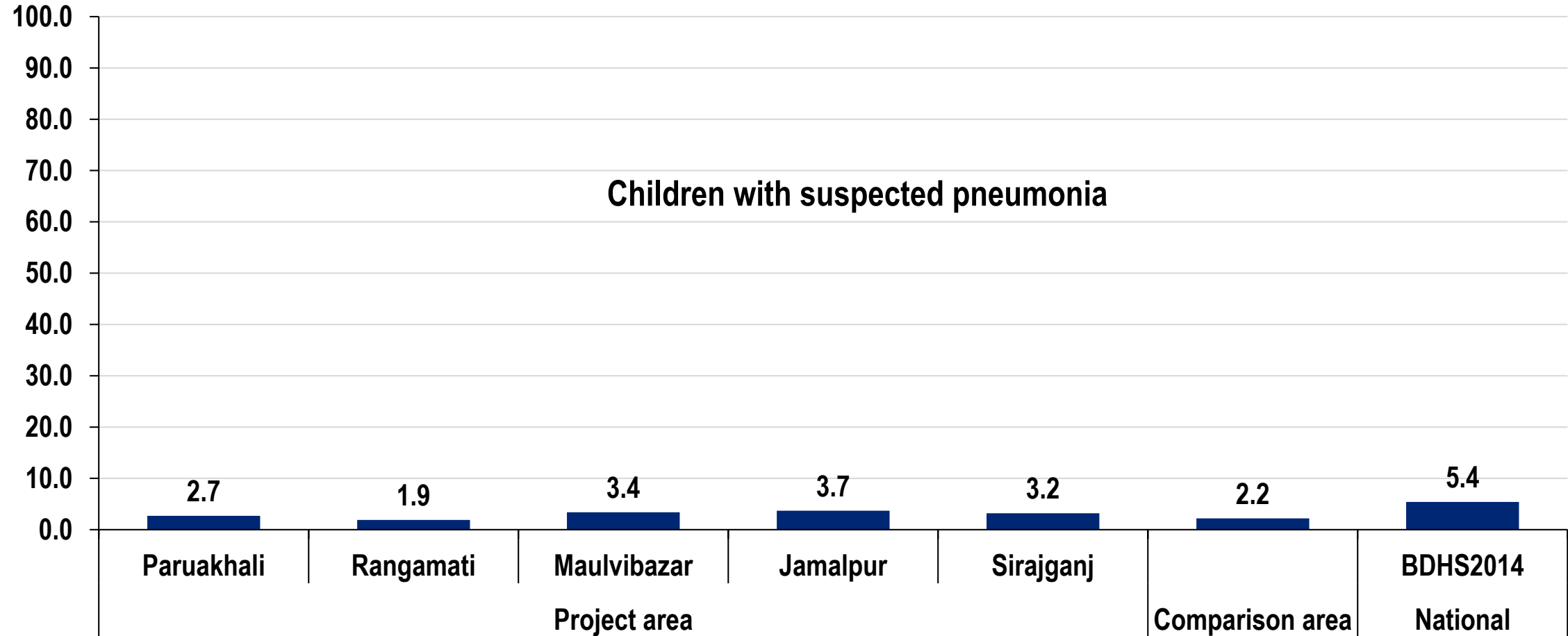
Newborn, young child nutrition care practice through breastfeeding

IYCF practice &
child care

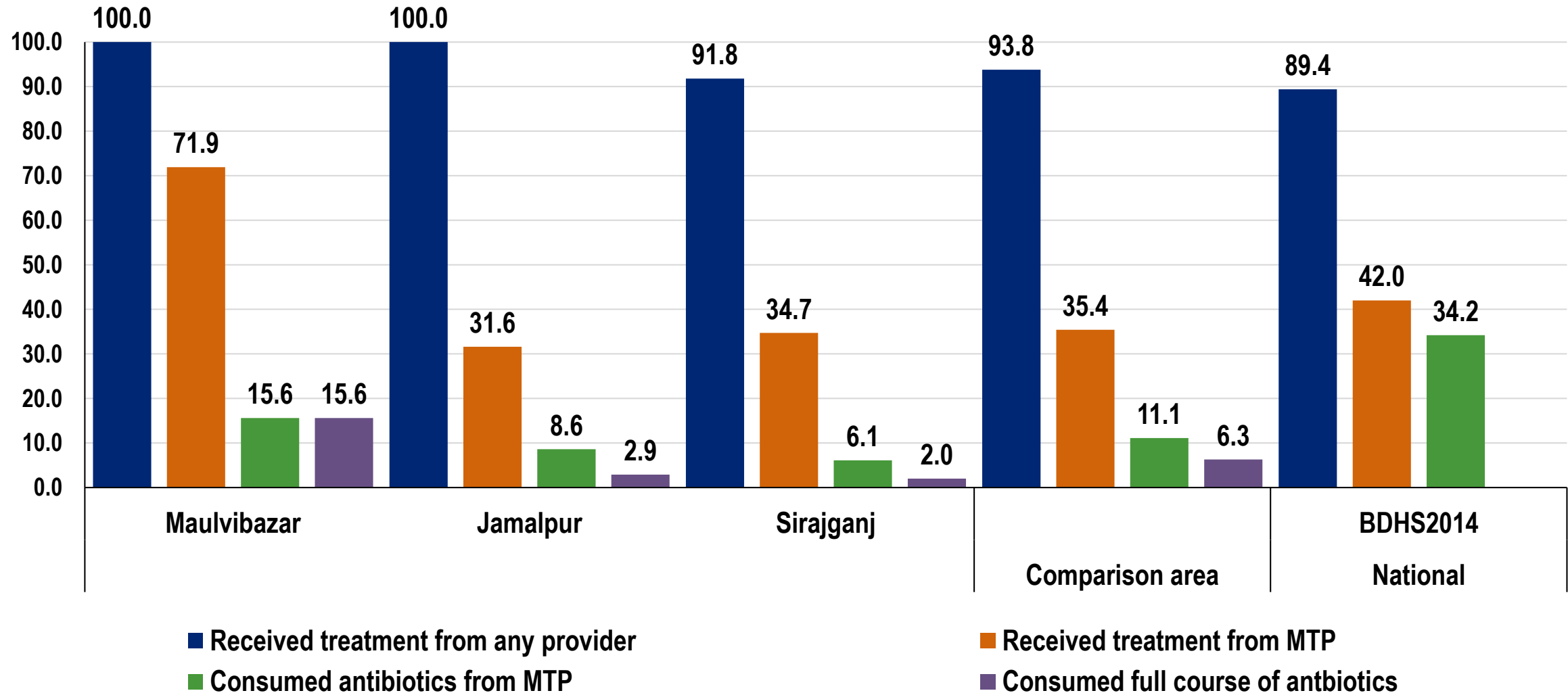


Child Health, Morbidity and Mortality

Community level suspected pneumonia among children 0-59 months



Community level management of children 0-59 months with suspected pneumonia



Neonatal and childhood mortality rates

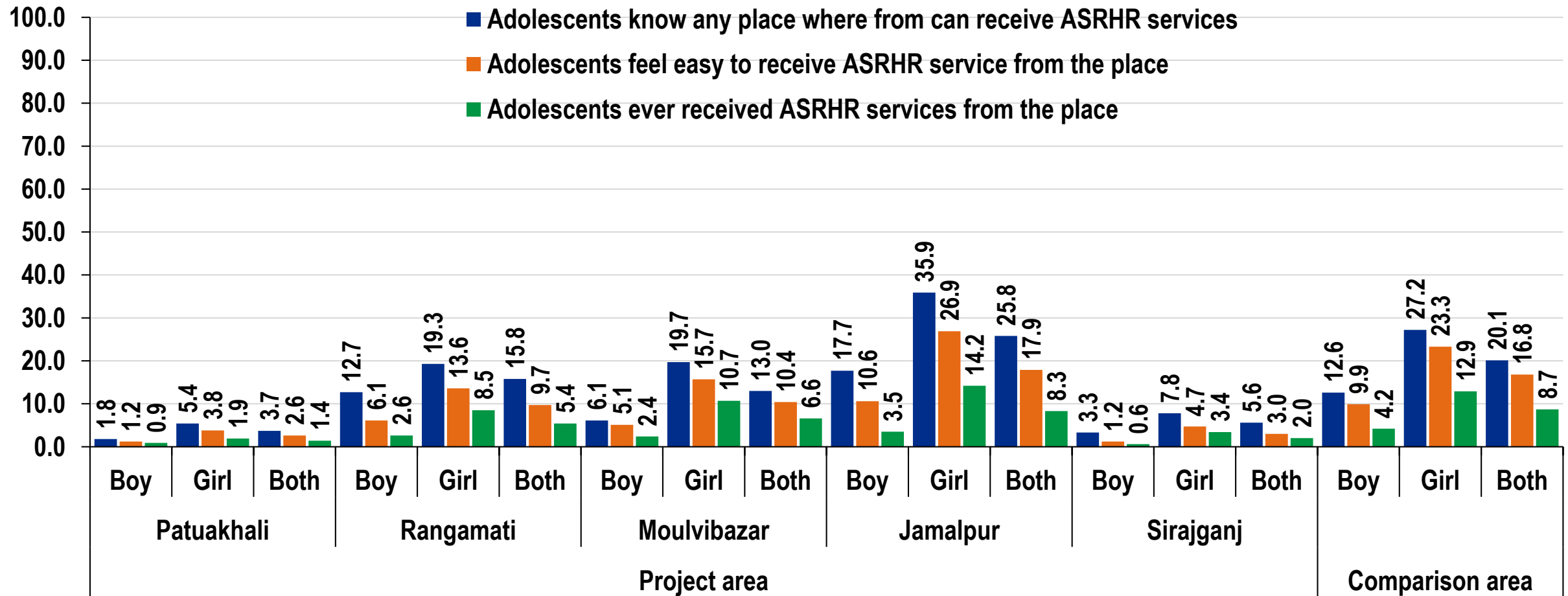
Neonatal, post-neonatal, infant, child, and under-five mortality rates for five-year periods preceding the survey
(Sample sizes: 9083 and 7353 ever married women age 15-49 in Project and Comparison areas respectively)

Years preceding the survey	Project area					Comparison area				
	Neonatal mortality	Post-neonatal mortality	Infant mortality	Child mortality	Under-5 mortality	Neonatal mortality	Post-neonatal mortality	Infant mortality	Child mortality	Under-5 mortality
0-4	28	10	38	7	45	25	8	33	10	42
5-9	40	10	50	6	56	32	15	47	13	59
10-14	39	11	50	12	62	30	21	51	14	64

Nationally (death per 1000 live birth in last 5 years)(BDHS 2014 and BDHS 2017-2018 respectively):
neonatal mortality rates- 28 and 30, infant mortality rates- 38 both, and under-5 mortality rates- 46 and 45

Adolescent Sexual and Reproductive Health and Rights (ASRHR) related advice or services to adolescents

ASRHR related advice/services: adolescents' knowledge on place and receiving service from that place with ease

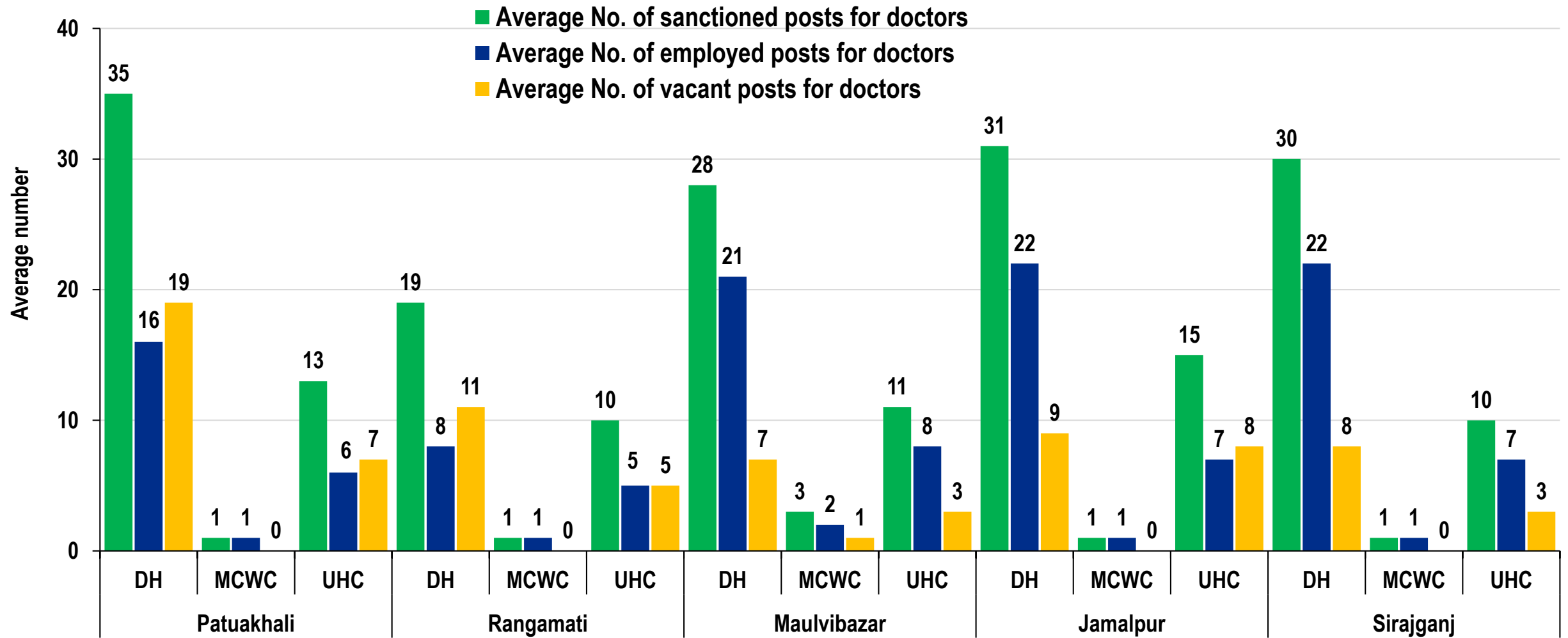


Maternal-Newborn-Healthcare Services in Health Facilities

Sample coverage of health facilities

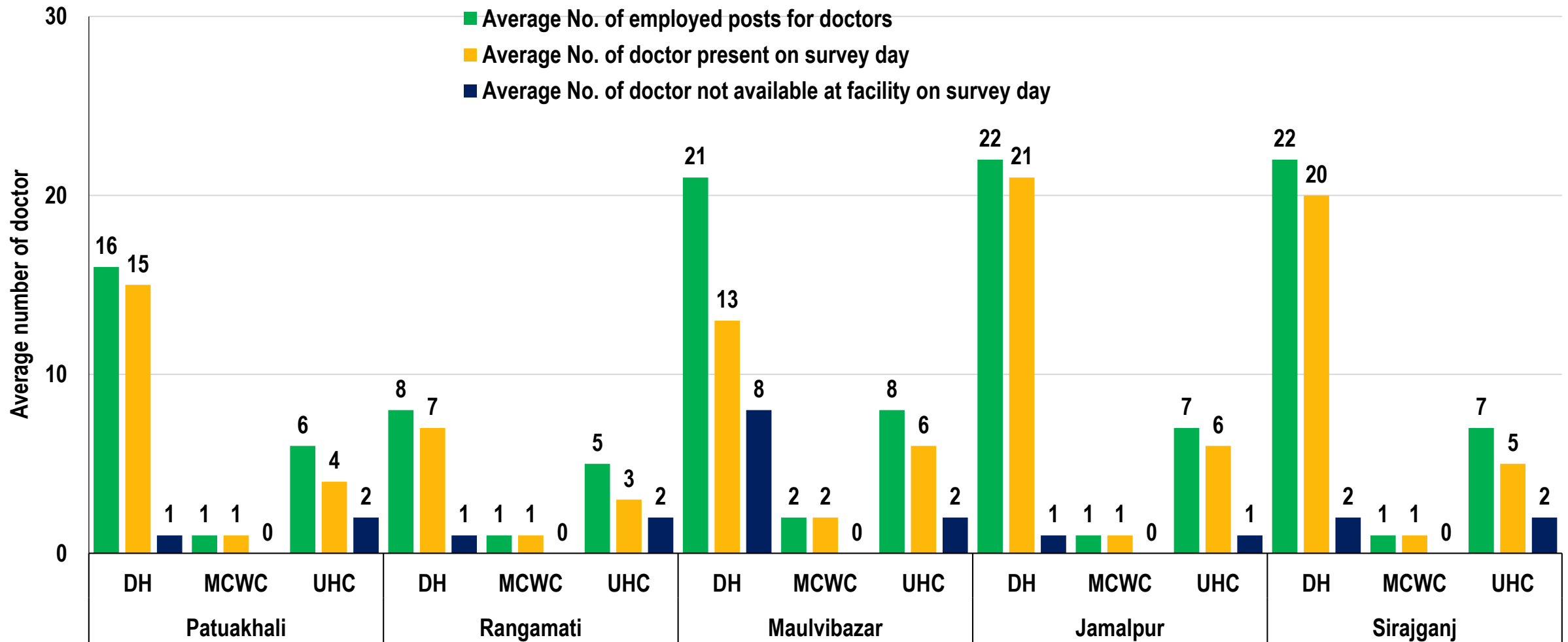
Type of facility	Project area		Comparison area	
	Number of available facilities	Number of surveyed facilities	Number of available facilities	Number of surveyed facilities
District and upazila public facilities				
MCH	0	0	1	1
DH	5	5	4	4
MCWC	5	5	4	4
UHC	35	35	26	26
Other government facilities	2	2	1	1
Union level public facilities				
UHFWC/FWC/USC/RD	352	69	233	46
Community Clinic	931	218	544	138
Private facilities				
Private clinic/hospital	202	103	73	54
Total	1534	437	886	274

Average Number of Sanctioned, Employed and Vacant Posts for Doctors



Number of UHCs in Patuakhali- 6, Rangamati-9, Maulvibazar-6, Jamalpur-6 and Sirajganj-8

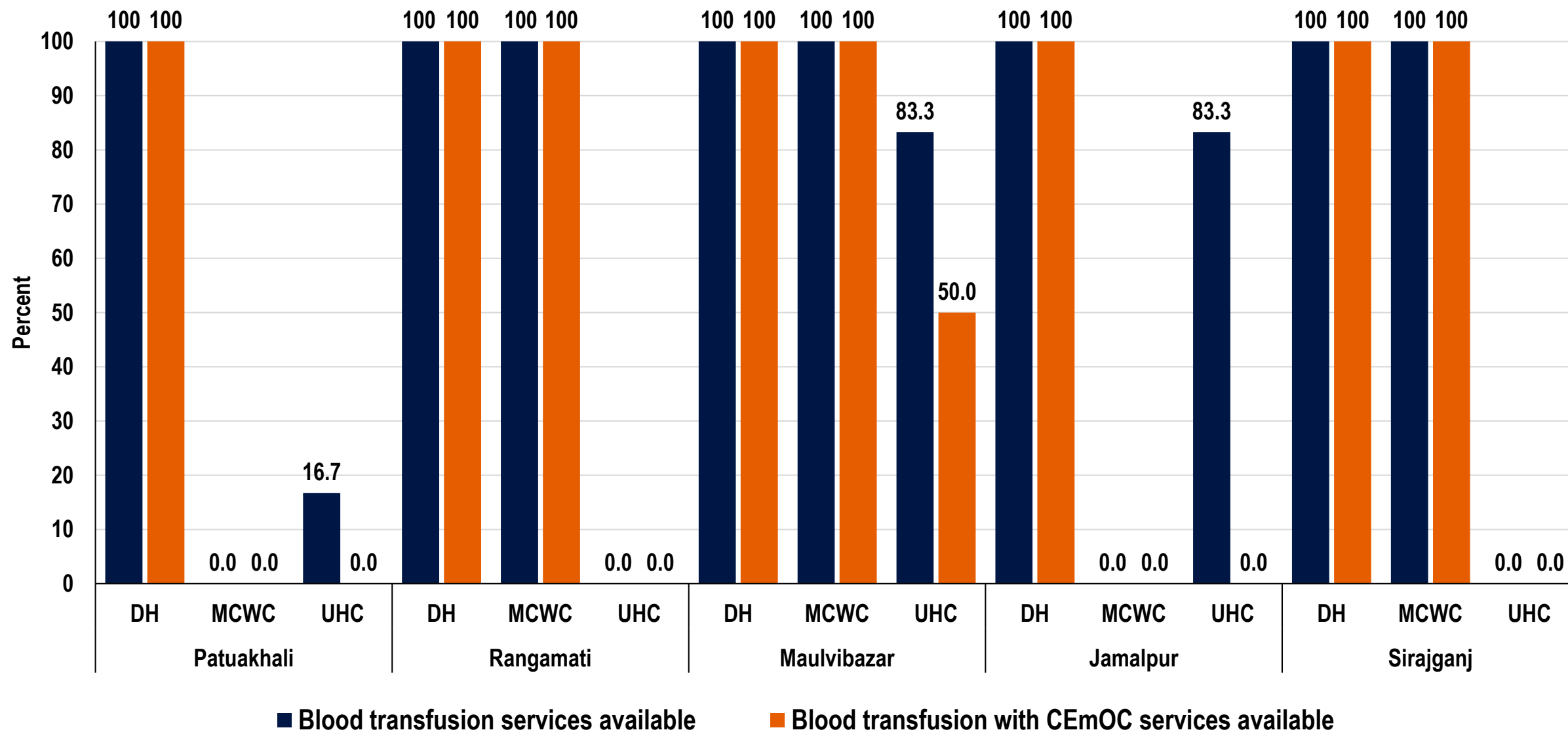
Doctors not available at facility on survey date (among employed posts)



Number of UHCs in Patuakhali- 6, Rangamati-9, Maulvibazar-6, Jamalpur-6 and Sirajganj-8

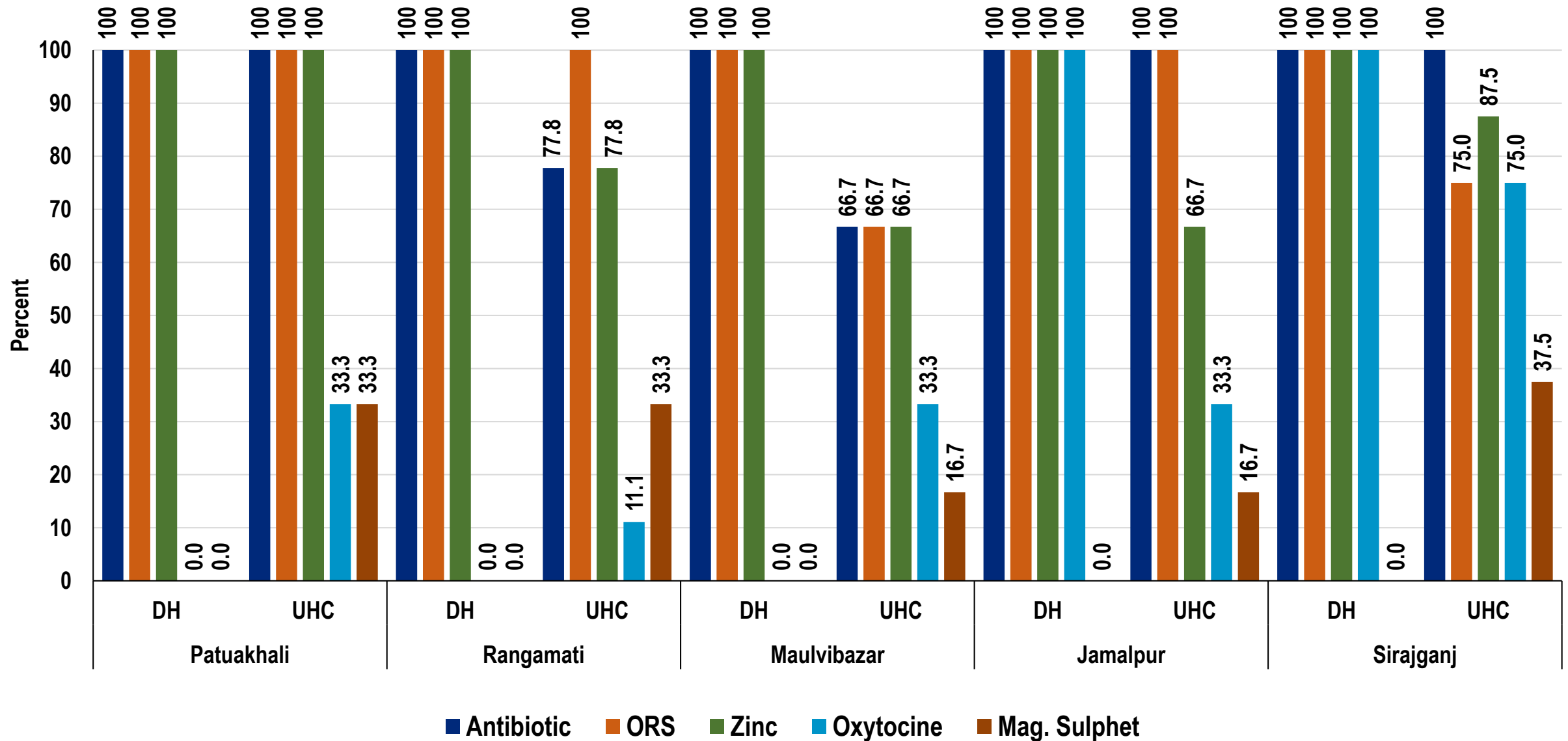
Main reasons for doctors' unavailability reported: remain on leave, in training, busy with official work

Blood Transfusion (screening, collection and transfusion) and CEmOC Services



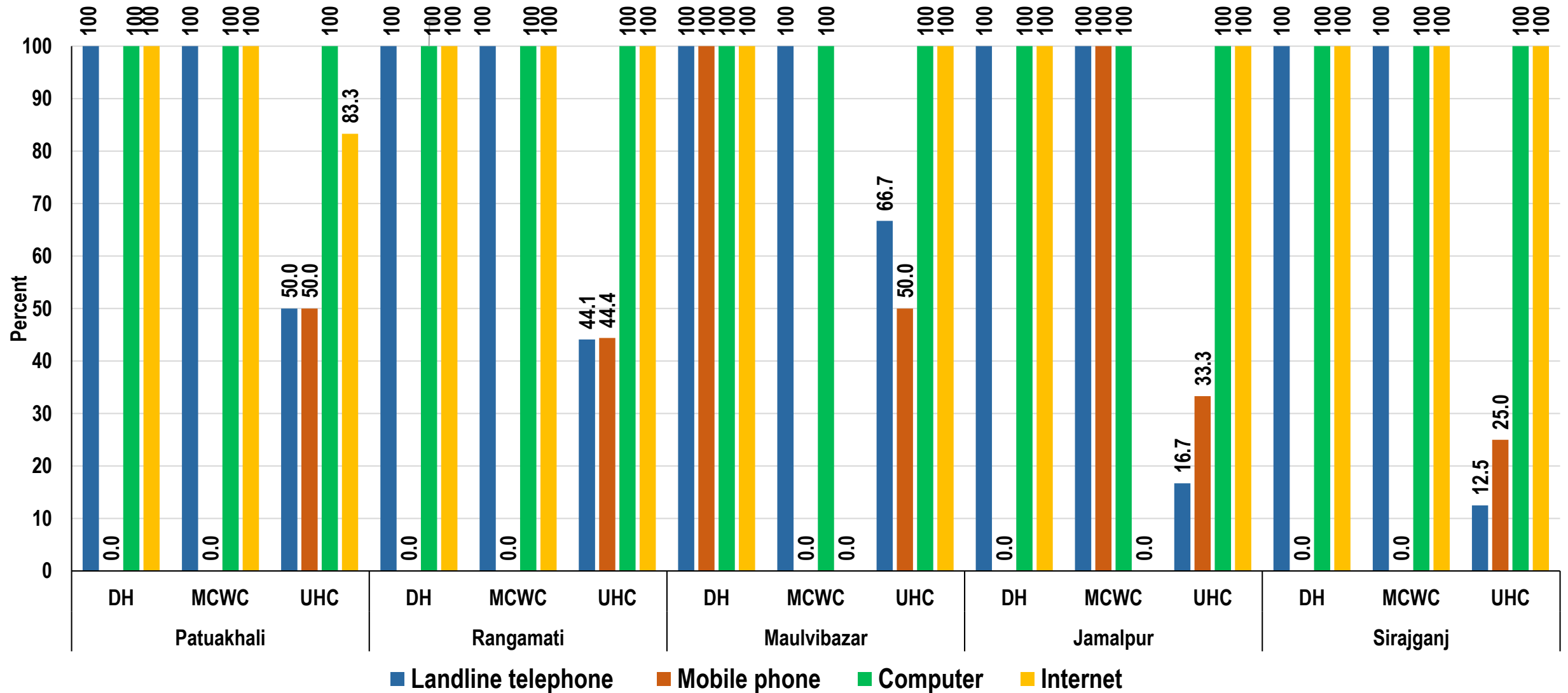
No stock out record of essential medicines in any time in last 3 months prior to survey

Health Facility Survey

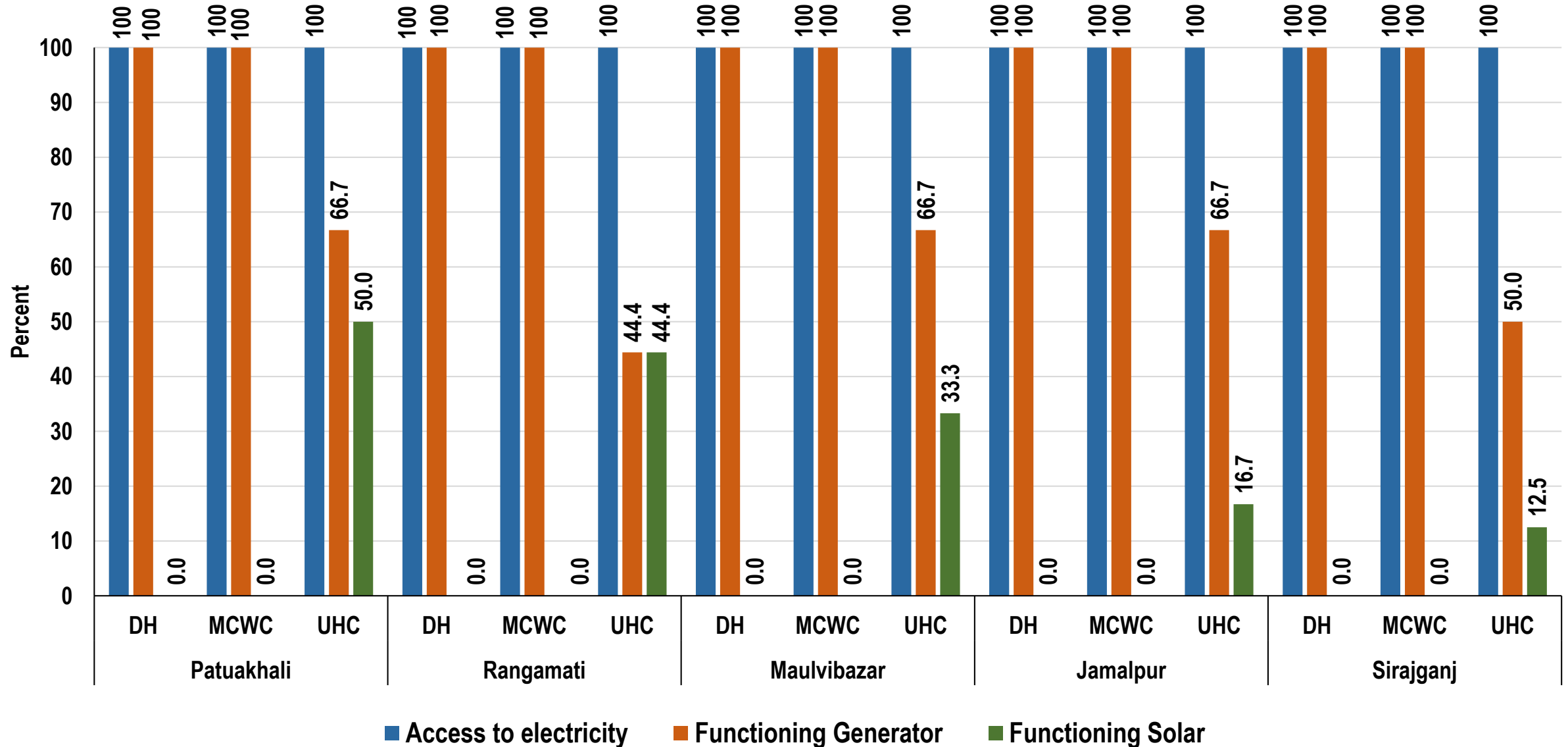


Functioning communication systems for service recipients (land phone, mobile phone, computer, internet access)

Health Facility Survey

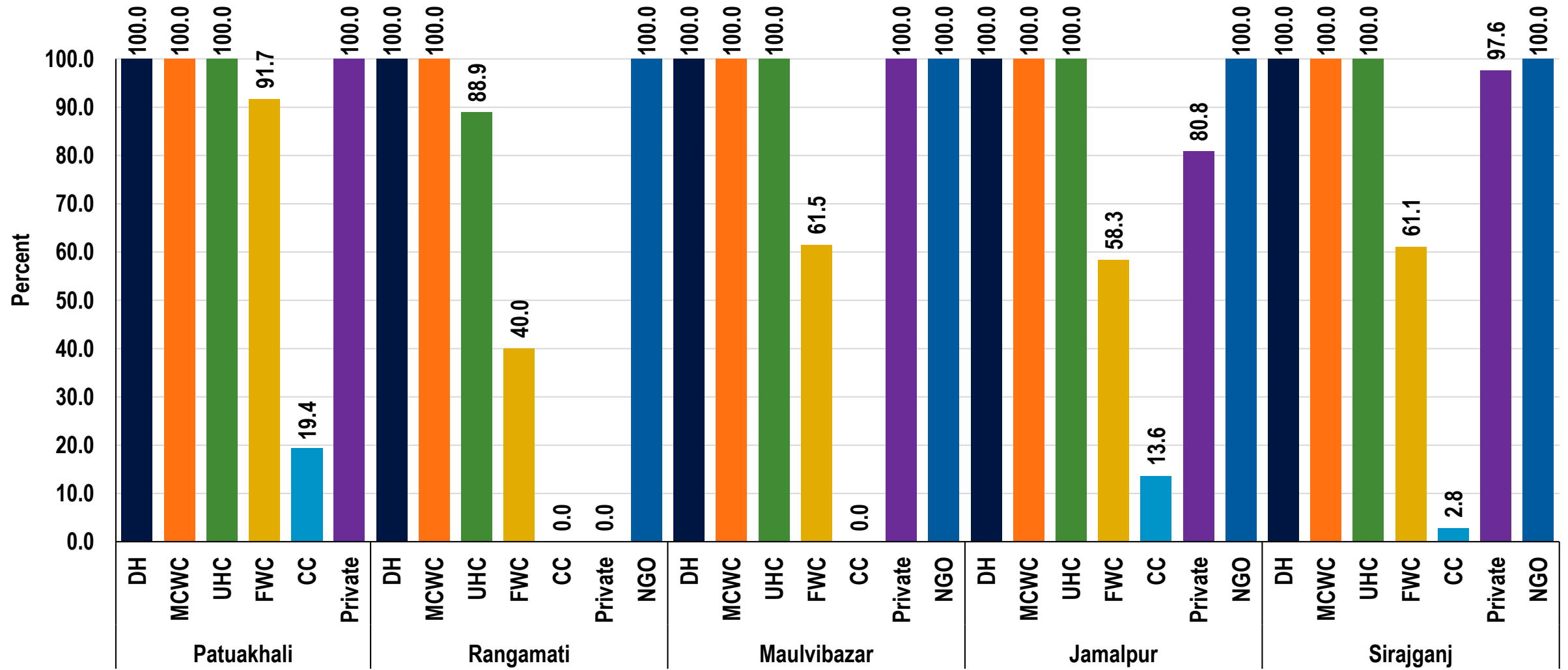


Power supply systems (electricity, generator, solar system)



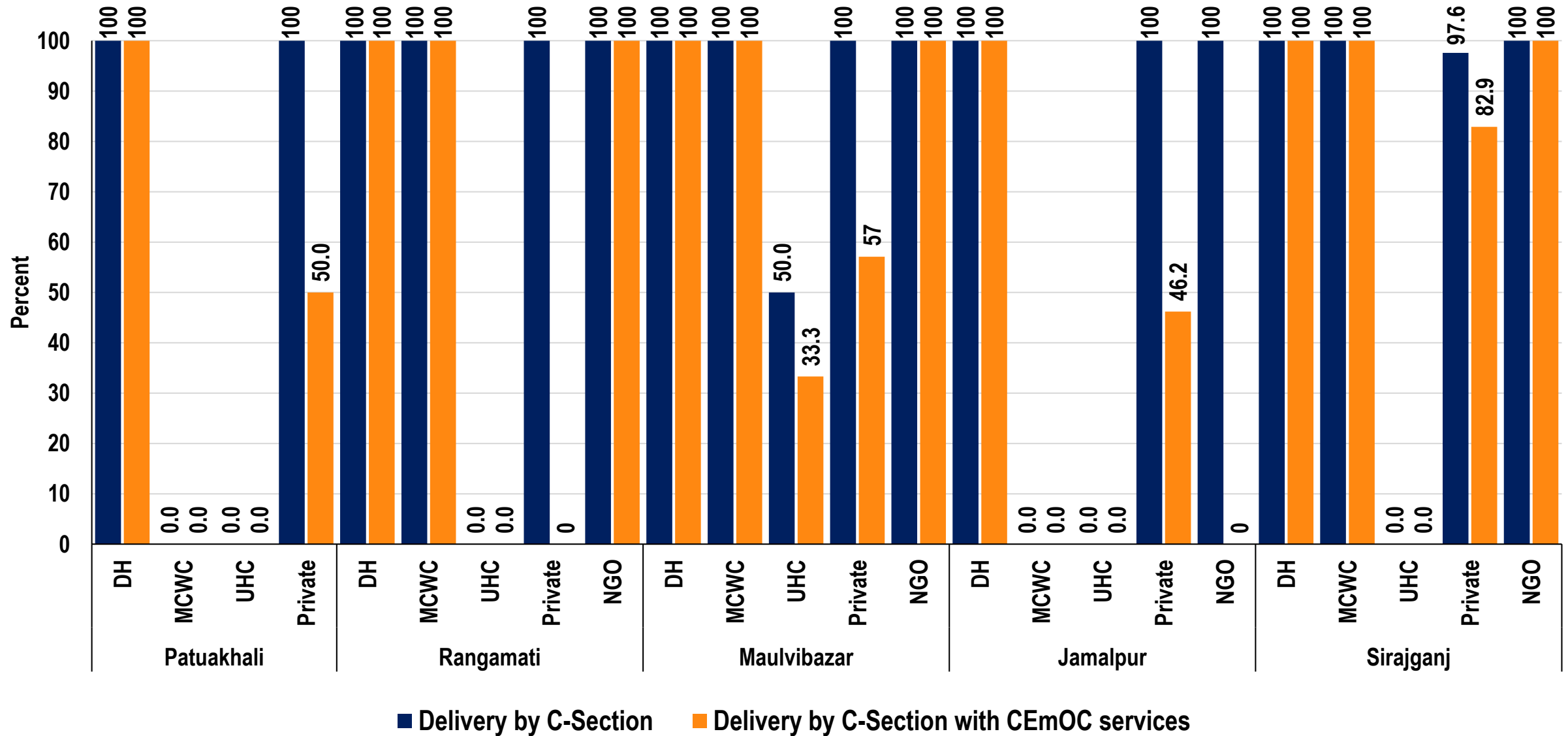
Facilities with Normal Delivery Services

Health Facility Survey



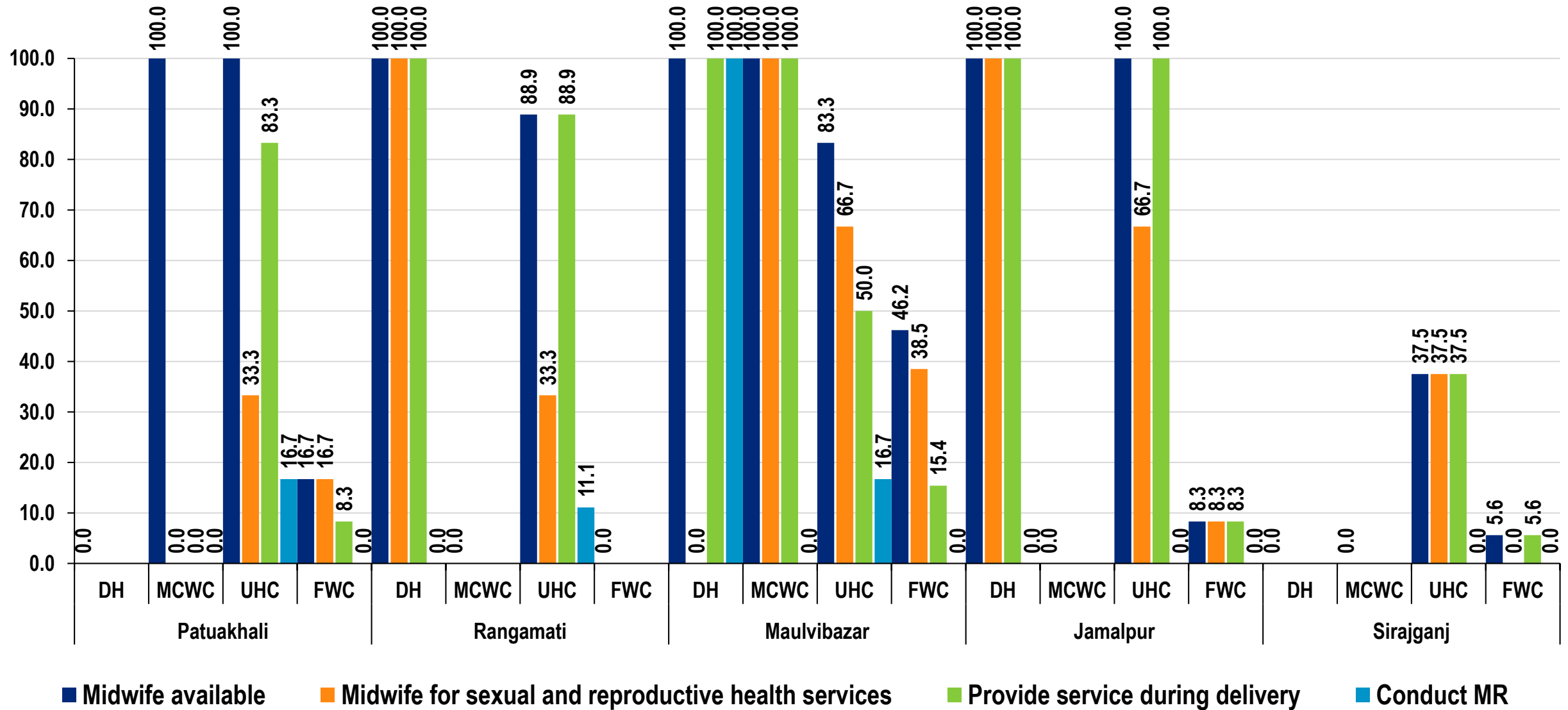
Facilities with C-Section and CEmOC Services

Health Facility Survey

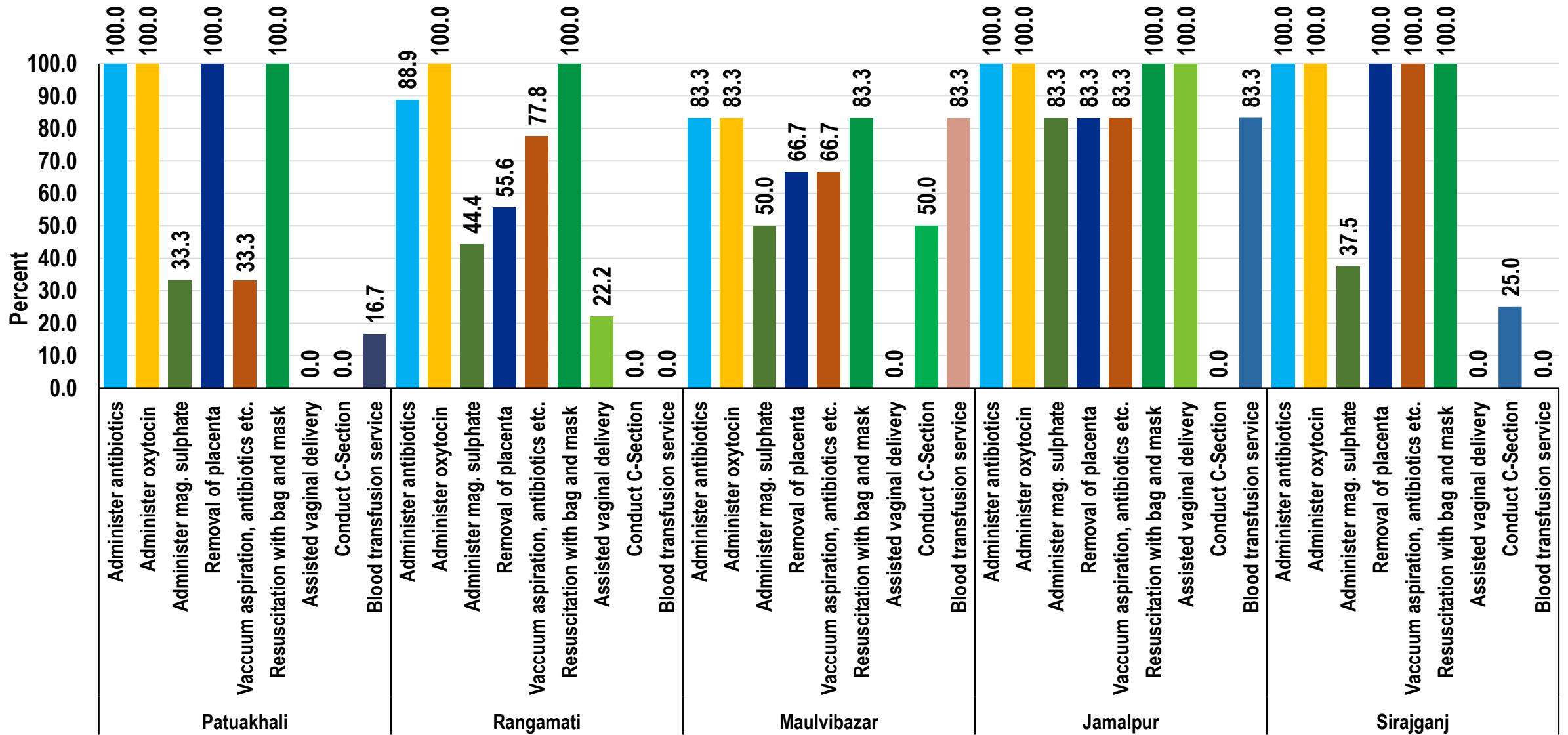


Facility with Midwifery Services

Health Facility Survey

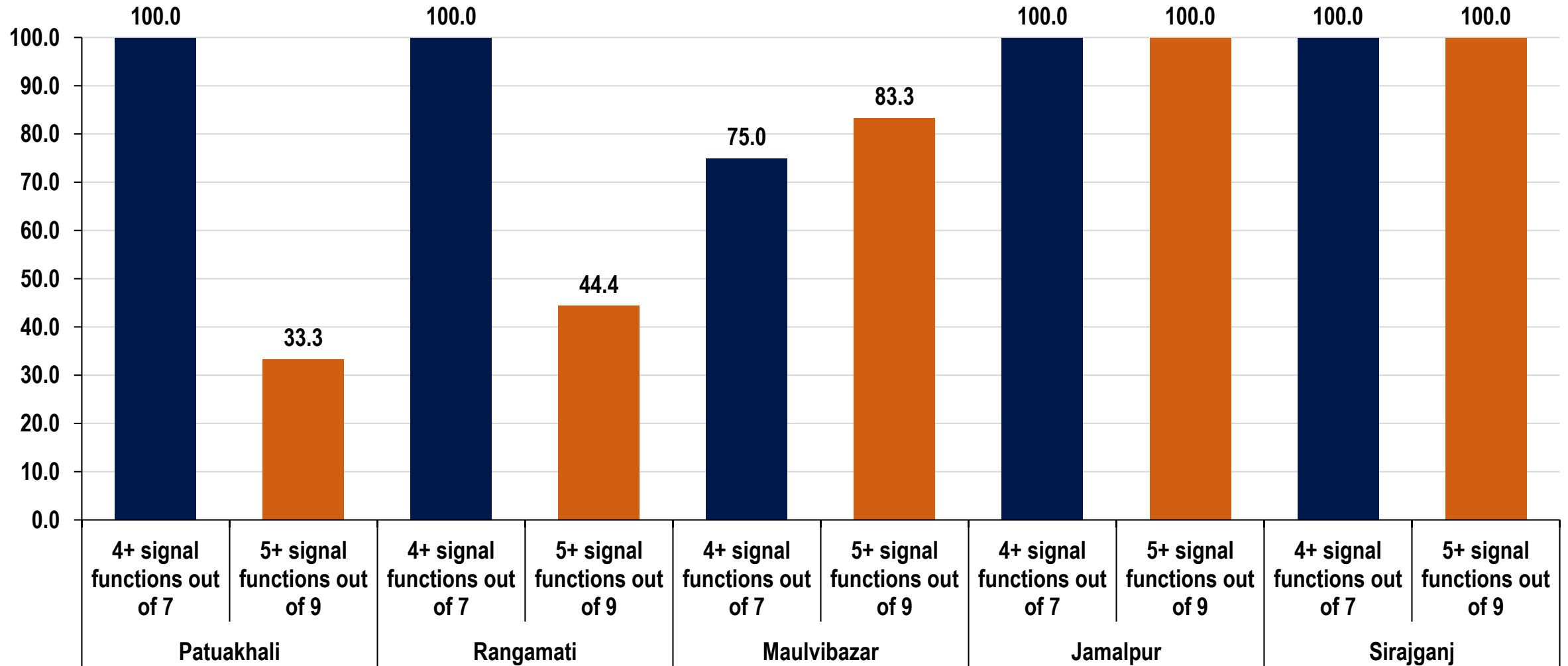


UHCs with 9 Signal Functions



UHCs with 4+ Signal Functions

Health Facility Survey



Health Facilities with SCANU and NSU

Health Facility Survey

District	Type of Facilities	SCANU	NSU	No. of Facilities
Patuakhali	DH	100.0	0.0	1
	UHC	0.0	0.0	6
Rangamati	DH	0.0	0.0	1
	UHC	0.0	0.0	9
Maulvibazar	DH	100.0	0.0	1
	UHC	0.0	0.0	6
Jamalpur	DH	100.0	100.0	1
	UHC	0.0	0.0	6
Sirajganj	DH	100.0	0.0	1
	UHC	0.0	0.0	8

Number of newborns treated at SCANU in last 6 months

Health Facility Survey

Districts	Number of newborns
Patuakhali	1800
Maulvibazar	1189
Jamalpur	830
Sirajganj	701

Quality of MNH services of UHCs based on average scores on 10 EMEN standards

EMEN (Every Mother Every Newborn) Standards		Mean % of scores out of total scores for each standard secured by UHCs	
		Project area	Comparison area
Standard 1	Providing evidence based safe ANC services	54.5	52.4
Standard 2	Evidence-based safe care is provided during labour and child birth (maternal and neonatal)	65.9	66.5
Standard 3	Providing evidence based safe PNC during labour and child birth	68.3	66.8
Standard 4	Providing maternal-&newborn healthcare to recipients by maintaining fundamental human rights and with full dignity and respect to them	75.5	79.7
Standard 5	Availability of governance system (Administrative System) to support the provision of quality maternal and newborn care	68.8	61.3
Standard 6	Safe and congenial physical environment of the health facility for providing maternal and newborn care	63.3	61.3
Standard 7	Availability of adequate number of qualified and competent staff to provide safe and quality mother and newborn care	80.0	72.0
Standard 8	Consistent availability of essential drugs, supplies, functional equipment, and diagnostic services to provide mother-&newborn care	72.6	64.6
Standard 9	Availability of health information system in the health facility to manage patients' clinical records and service data	71.7	75.8
Standard 10	Availability of services in the health facility to ensure continuity of maternal and newborn care	57.9	61.5
Overall %		66.3	65.3

Note: Each standard has several questions. Each of them had scoring values of 0-2 or 0-1-2 indicating a specific indicator being fully, partially or not-at-all implemented at the surveyed UHCs.

Conclusion

- Maternal-newborn-child-healthcare at community level is not promising in both areas; ample scope of improvement
- Major sources of healthcare: Public facilities with good share of private facilities in both areas
- Low coverage of MNH services and facility delivery

Main reasons:

- Lack of easy accessibility to adequate and appropriate health facilities and services with skilled and adequate number of service providers
- Lack of awareness of people

Conclusion

(continued)

Comparative findings show better status in Comparison area in some respects.

Propensity Score Matching (PSM) analysis is planned to make the Project and Comparison areas similar by using Logit or Probit analysis to support impact evaluation of the intervention (estimate of changes due to intervention) at endline controlling background variables included in the survey

Acknowledgement

UNICEF Bangladesh

❑ Health Section

- **Ms. Maya Vandenant, Chief**
- **Dr. Md Ziaul Matin, Health Manager**
- **Dr. Shamina Sharmin, Health Specialist**
- **Dr. Minjoon Kim, Health Specialist**

❑ SPEAR Section

- **Mr. Carlos Acosta, Chief**
- **Ms. Juanita Vasquez Escallon, Research and Evaluation Specialist**

Thanks owe to the technical review committee on MNH baseline survey, Civil Surgeons, Deputy Directors Family Planning, Upazila Health & Family Planning Officers, Upazila Family Planning Officers, Residential Medical Officers, Sub-Assistant Community Medical Officers, Family Welfare Visitors, Community Healthcare Promoters of government health facilities and directors/managers/key personnel of NGO and private health facilities.

Thanks owe to all participants in the survey and field investigators, without their cooperation this study would not have been possible to implement successfully.

Study team

SURCH and Institute of Health Economics, University of Dhaka

Professor Muhammad Shuaib
Professor Dr. Sushil Ranjan Hawladar
Dr. Nasrin Sultana
Dr. Rafia Rahman
Dr. Sheikh Tawhidul Islam
Dr. Sharmin Afroze
MAFM Ahnaf
Md. Mokhlesur Rahman
Md. Ziaul Hasan Sikder
Mohammad Shakwat Hossain Khan
Muhammad Rashed
Muhammad Sadeq
Nailla Ferdousi Haq
Laila Begum

Thank You