# Improving health care access and quality in the context of achieving Universal Health Coverage among scheduled tribes:

Implementation research in Kokrajhar, Assam

#### Key findings and recommendations

October 2020 - June 2022







## **Content**

BACKGROUND	3
KEY FINDINGS & RECOMMENDATIONS	4
COMMUNITY	5
HEALTH SYSTEM	9
SNAPSHOTS OF IEC MATERIALS	23
IEC ACTIVITIES	26

## **Annexure**

TABLE 1: AVAILABILITY OF FUNCTIONAL EQUIPMENT IN PHC	12
TABLE 2: AVAILABILITY OF FUNCTIONAL EQUIPMENT AT HWCS	13
TABLE 3: NUMBER OF HEALTH STAFF AT PHCS	14
TABLE 4: NUMBER OF HEALTH STAFF IN HWCS	15
TABLE 5: NUMBER OF PHCS WITH ESSENTIAL DRUGS	15
TABLE 6: NUMBER OF HWCS WITH ESSENTIAL DRUGS	19



## **Background**

Implementation research to improve primary health care access among the tribal community in Kachugaon block of Kokrajhar district is being conducted since 2020. Funded by the Indian Council of Medical Research, Government of India, this study is conducted by The George Institute for Global Health (TGI), New Delhi in partnership with Northeast Research and Social Networking (NERSWN). This research is implemented in three phases – formative, implementation, and evaluation.

- 1. Formative phase assessed the availability, accessibility, adequacy, affordability, and acceptability of the health services among tribal people; identified barriers to accessing health services by the community, and challenges of health providers in delivering health services. A total of 2020 households were surveyed. Of which 353 households had women with children upto 1 year of age.
  - Findings of the formative phase was disseminated to the district and block health officials. Based on the findings of formative research and discussions during the consultative meeting, implementation strategies were developed to improve maternal health, prevention, and screening of diabetes and hypertension, and health services in intervention primary health centres (PHCs) and health and wellness centers (HWC).
- 2. Intervention phase was implemented at the community and health system level, in coordination with the district and block health officials and health staff of intervention health facilities. We selected Saraibil and Jaraguri as intervention PHCs and Raimona, Shimultapu, Dawaguri and Janaligaon were intervention HWCs. A total of 72 villages were covered across two PHCs. At the community level we conducted awareness in the intervention villages about delayed marriage, pregnancy care and childbirth, safe abortion, prevention and screening of diabetes and hypertension, and the range of services available at HWCs. The Gaon Budha (village head) and other village representatives such as schoolteachers and youth along with ASHAs were engaged to conduct village meetings, awareness programme through school rallies, folklore songs, and group discussions. [refer page no. 23]. Information Education Communication (IEC) materials were also used for creating awareness and dissemination on maternal health, and noncommunicable diseases [refer page no. 26].
  - At the **health system level**, the focus was to improve basic amenities, the process of maternity care, and biomedical waste management in PHCs and HWCs. Quality Assurance Committees chaired by Medical Officer (In-charge) was formed in PHCs to monitor and address the gaps. Staff nurses were oriented about LAQSHYA and Indian Public Health Standard (IPHS) guidelines. Concurrently, village health and nutrition day (VHND) were visited, and gaps were discussed with the ANMs. We also worked with the District Programme Management Unit and Community Health Officers to cover the forest and remote villages through mobile medical unit and outreach health camps.
- **3. Evaluation phase** of the intervention will be conducted in intervention PHCs, HWCs, and villages from September to December 2022.

## **Key Findings & Recommendations**

We present the summary of key findings and observations from the formative and intervention phase for **further consultation** (s) with the district to address the identified gaps. Findings and recommendations are presented separately for community and health systems in Table 1 and Table 2 respectively. Annexures 1 to 6 presents health facilitywise gap in equipment, drugs, and supplies in intervention PHCs and HWCs.



## **Community**

#### A) MATERNAL HEALTH

- Early marriage and pregnancy among tribal women are prevalent. Twenty-three percent of women (N=353) were married before the age of 18 years and about one-third of the women (36.5%) had their first child before the age of 20 years.
- Ninety nine percent of women (N-353) sought antenatal check-up (ANC) during pregnancy, however only 46% women reported completing four or more ANC. We found poor knowledge about the importance of complete ANC among women.
- Poor consumption of iron-folic acid (IFA) tablets by pregnant women due to tribal beliefs. Despite 90% of women (N=353) reporting receiving/consuming IFA tablets, only 43% reported consuming all tablets, and 47% consumed some.
- Institutional deliveries are not free. Out-of-pocket expenditure (OOPE) incurred for institutional births at a public health facility (See Figure 1)
- Women preferred institutional births, but due to poor access to transportation services/ health facilities home deliveries were conducted.

About 6% (N=353) of women reported having home deliveries.

 Home visits by ASHAs after delivery was reported by 74% of women (N=353). However, the quality of these visits needs to be reviewed.

## B) NON-COMMUNICABLE DISEASES (NCDS)

- Reported prevalence of diabetes and hypertension among men and women. Of the 211 household members who reported experiencing chronic illnesses, 23% were diabetic (22% male and 24% female) and 54% were hypertensive (49% male and 57% female).
- Private chemists are the primary source for more than two-fourth (56%) of households (N=2,020) for seeking health care for non-communicable and other disease/illness.
- Lack of awareness about non-communicable diseases services at HWCs and poor knowledge about prevention and screening of diabetes and hypertension in the community



TABLE 1: COMMUNITY: KEY FINDINGS AND RECOMMENDATIONS

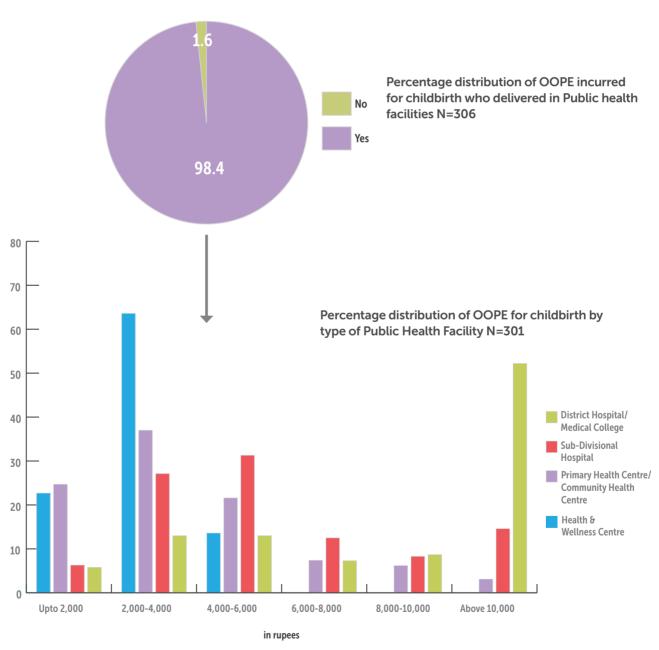
Category	Key findings	Recommendation	Actors	Remarks
Maternal Health	Early marriage and pregnancy.  Community members are concerned about girls marrying before the age of 18 years.  Most parents are against early marriage but were helpless as girls/boys elope and marry.	Convergence with education, PRI, and social welfare and engaging with the gaon budhas, Village council development committee (VCDC) members, and schoolteachers in the villages to prevent marriages.  Engage youth volunteers/ peer educators actively for generating awareness about the harmful impact of early marriage and pregnancy.  Methods such as community meetings, school rallies, folklore, and education in schools during school health programme could be explored.	Community leaders  Health department <sup>1</sup> Education department  PRI department  Social Welfare department	Bodoland Territorial Region to take the initiative of convergence across departments and monitor the progress.
	Poor full ANC	Services of Village Health and Nutrition Day (VHND) to be strengthened  Generate knowledge about the importance of ANC among women and their families so that they take ownership of their own health and less depend on ASHAs for follow-up  Engage self-help groups, and local NGOs such as NERSWN for generating awareness in the community	Community leaders Health department Social Welfare department	Strengthen monitoring and supervision to ensure regular conduct of VHND and all the requisite services are provided. Local NGOs could be partnered for monitoring VHND as well.
	Poor consumption of IFA	Use platforms like VHND for addressing misbeliefs and counseling by Auxiliary Nurse Midwife (ANM).  Train ASHA and ANM on counseling (which at present is poor) and engagement with women  Engage local NGOs such as NERSWN, selfhelp group for generating awareness about nutrition, pregnancy care in the community and addressing the misconception.	Community leaders Health department Social Welfare department	Strengthen monitoring and supervision to ensure regular conduct of VHND and all the requisite services are provided

<sup>1</sup> Health department includes National Health Mission and Department of Health and Family Welfare

Category	Key findings	Recommendation	Actors	Remarks
Maternal Health	Out-of-pocket expenditure (OOPE) incurred for institutional births at a public health facility	Drugs and supplies and indenting process to be strengthened for adequate availability of prescribed medicines and supplies such as gloves etc  Prescription audit in health facility (health department to decide the frequency)	Health department Community	Sensitization of health providers including doctors about informal payment and developing a mechanism for action.
		Empower the community to take a stand on informal payments by health providers.  Local NGOs could be involved in generating awareness about free services and empowering community		
		Create a block/district level grievance redressal system (with a phone no) where patients can report informal payment. These contact details of the redressal system to be displayed in health facility compound/waiting area in local language		
	Poor transportation services in remote areas	108 ambulance services cannot reach many remote villages. A mechanism to be developed for engaging local vendors including boat owners for transporting pregnant women	Health department	
Non- Com- municable Diseases	Poor knowledge about prevention and screening of diabetes and hypertension	Create health clubs in villages with active participation of community leaders. This could be a platform for sharing health information, and illness experiences, peer education for raising awareness, etc.  Additionally, it could also be workout place for the diabetic and hypertensive. This could be piloted in a few villages to know its benefit before scaling it up in the entire district.	Health department	
	Private chemists are the primary source of health services  Lack of awareness about non-communicable diseases services at HWCs	Generate awareness in the community about NCD prevention and screening by engaging community leaders, and existing groups in the villages such as youth club, schoolteachers and local NGOs for continued engagement. Methods such as folklore, and street drama, could be explored	Health department	

Figure 1 presents out-of-pocket expenditure (OOPE)incurred for institutional births at a public health facility. Of the 353 women interviewed, 87% of women reported childbirth at a public health facility. Of those women (N=306) who delivered in a public health facility, 98% reported OOPE during childbirth. The expenditures include informal payment to health providers/staff, medicines, and consumables such as IV sets, syringes, gloves, food, etc.

FIGURE 1: OUT OF POCKET EXPENDITURE (OOPE) FOR CHILDBIRTH WHO DELIVERED AT PUBLIC HEALTH FACILITY



This is based on the household survey conducted between October 2020 and March 2021.

A total of 2020 households were covered, of which 353 were households that had a child upto one year of age.

## **Health System**

#### INFRASTRUCTURE AND MANPOWER

- Basic amenities such as separate male and female toilets, safe drinking water facilities, and regular electricity were not available in PHCs and HWCs.
- Ill-equipped labour room in PHCs and HWCs (See annexures 1 & 2).
- MBBS doctor's position is vacant in both the PHCs. Only MBBS doctors posted as a part of rural posting for one year were available.
- Shortage of paramedics such as a pharmacist in one PHC, Grade IV staff/sweeper in both PHCs, one ANM in one HWC and multi-purpose worker position was vacant in two out of four SCs (See annexures 3 & 4).
- Shortage of essential drugs and supplies across all PHCs and HWCs (See annexures 5 & 6).
- No provision for ASHAs to stay with the woman they accompanied for delivery in PHCs.
- Poor management of biomedical waste across PHCs and HWCs. Segregation to disposal of hospital wastes is not done properly. No supply of color-coded bins from the district.

#### **SERVICES**

- No provision of food for women after childbirth.
   No funds allocated to PHCs for diet.
- Medical abortion being conducted by a few AYUSH doctors at PHCs, as reported by women and observed
- Lack of transportation facilities and outreach services such as health camps and VHND in the remote villages like Dhaguri Tapu.

#### ASHAS KNOWLEDGE AND SKILLS

 Poor knowledge and skills of ASHAs about nutrition, home-based newborn care and Community Based Assessment Checklist (CBAC).

#### LANGUAGE BARRIER

 ASHAs and ANMs belonging to the Bodo tribe face difficulty in ready MCP cards and CBAC forms written in the Assamese language.

## SUPPORTIVE SUPERVISION AND MONITORING

• Lack of supportive supervision and monitoring by the district and block.



TABLE 2: HEALTH SYSTEM: KEY FINDINGS AND RECOMMENDATIONS

Category	Key findings	Recommendation	Remarks
1. Physical Infrastructure	Basic amenities such as separate toilets for male and female patients, safe drinking water, and continuous power backup in the PHCs/HWCs is not available.	Investment in improving basic amenities such a toilet, power backup to ensure 24hrs supply of electricity (if not for entire PHC/HWC, at least in labour room to ensure that essential equipment is functional)  Rogi Kalyan Samiti to be oriented about their roles and responsibilities in improving amenities and services in the health facilities. One day orientation training could be implemented. This could be piloted in a few health facilities beforez scaling it up.	Bodoland Territorial Region could consider strengthening, in activities not supported by NHM.
	No provision for ASHAs to stay with the woman they accompanied for delivery in PHCs.	Construction of room for ASHAs with toilet, beds, and cooking (if possible) facilities for them to rest while accompanying a pregnant woman.	This we believe is important for ASHAs coming from far flung villages – a way to support their contribution towards improving institutional delivery/health outcomes and dignity.
2.Manpower	Shortage of essential manpower such as pharmacist in Saraibil PHC since 2017, Grade IV staff/ sweeper in both the PHCs MBBS doctor's position is vacant in both the PHCs.	Health human resources database, continuously updated with health provider/paramedical staff. Posting of a contractual pharmacist under National Health Mission to fill the vacant position (if budgeted)	As per Medical Officer (I/C) Hospital Management Committee fund is not enough to hire a full time Sweeper for the PHC].
	MBBS doctors reluctant to work in Kokrajhar district. Presently, in both the PHCs, doctors under compulsory rural posting services are rendering services	Rationalized posting of doctors and transparent transfer policy based on categorization of rural health facilities to ensure that doctors are not confined to urban/safe districts.	As per district officials, posting of MBBS doctors in Kokrajhar is a struggle. Regular doctors take transfer to another district. Currently, doctors under compulsory rural posting are being posted.  Bodoland Territorial Region to pursue with the State and to follow transparent posting & transfer policy
	ANM position vacant in Shimultapu HWC since 2020 MPW position vacant in Raimona HWC since 2017 and Dawaguri HWC since 2015	Posting of ANM and Multipurpose worker (MPW) under National Health Mission to fill the vacant position (if budgeted)	

Category	Key findings	Recommendation	Remarks
3. Drugs and supplies	Shortage of essential drugs and supplies such as cord clamp for labour room, oxygen inhalation, in both the PHC/HWCs. Other supplies such as glucose strips are in shortage.	Investment in improving in inventory management for drugs and supplies	
4. Provision of food	No provision of food for women after childbirth.	Allocating funds for providing food to mothers after delivery and during their stay at PHC. This is essential for women coming from far flung villages.	
5. Abortion care	It was reported that women are seeking abortion services from AYUSH doctors at PHCs.	Explore training of Ayurvedic doctors at PHCs to enhance their skills (particularly in PHCs without MBBS doctors) to avoid unsafe abortion	
6.Biomedical Waste Management	Segregation to disposal of hospital wastes not done properly Color coded bins not available	Develop training programme for health staff on biomedical waste management. Supply of color-coded bags and bins to the health facilities  Formation of quality assurance committee (QAC) at state and district level to monitor and address basic issue and seek state/district level intervention wherever needed	
7. Supportive supervision	Lack of supportive supervision and monitoring. This is impacted the quality of care and has led to absenteeism of ANMs at SCs and paramedics/health & programme staff in PHCs	Formation of quality assurance committee (QAC) at state and district level to monitor and address basic issue and seek state/district level intervention wherever needed  Formation/active participation of state and district level supportive supervision team; and developing a feedback mechanism to address the gaps	
8.Geographical accessibility	Transportation barriers to access health care by people living in riverine island and forest areas (where 108 ambulances cannot reach)	Improving the availability of transport between villages and health centres. Initiatives such as mobile bikes, community managed transport services or community pool funds could be explored	
9.Training	ASHAs require refresher training on nutrition, home-based newborn care etc	Training need assessment of ASHAs and developing a refresher training programme  Training modules to be translated in the Bodo language	In our meeting with ASHAs in intervention PHCs we randomly asked questions on HBNC, antenatal care/ postnatal care, and most ASHAs could not answer properly.  A few ASHAs suggested training need to improve their knowledge and services

## **Annexures**

#### TABLE 1: AVAILABILITY OF FUNCTIONAL EQUIPMENT IN PHC\* (N=2)

Equipment	Saraibil	Jaraguri
Labour room	1	
A labour table	✓	✓
I/V Stand	✓	✓
Suction machine	✓	✓
Facility for Oxygen administration	×	✓
Sterilisation equipment-Autoclave	✓	✓
24-hour running water with Infection Prevention equipment and supplies	×	×
Electricity supply with back-up facility (generator with POL)	×	×
Attached toilet facilities	✓	✓
Emergency drug tray with following drugs	'	'
Inj. Oxytocin	✓	×
Inj. Diazepam	×	×
Tab. Nifedipine	×	×
Inj. Magnesium sulphate	✓	×
Inj. Lignocaine hydrochloride	✓	×
Sterilised cotton and gauze	×	×
Adequate number of gloves	×	×
Sterile syringes and needles	×	×
Sterile drip/IV sets	×	×
Delivery kits (for normal delivery and assisted deliveries)	×	×
Newborn care corner		'
Open care system: radiant warmer, fixed height, with trolley, drawers, O2-bottles	✓	✓
Resuscitator (silicone resuscitation bag and mask with reservoir) hand-operated, neonate, 500 ml	✓	×
Weighing Scale, spring	✓	×
Pump suction, foot operated	×	×
Thermometer-clinical 32-34 <sup>0</sup> C	×	✓
Thermometer -digital 32-34 ° C	✓	×
Light examination, mobile, 220-12 V	×	×
Hub Cutter, syringe	✓	✓
Laboratory		
Colorimeter	×	×
Test tubes	×	✓
Pipettes	✓	×
Glass rods	×	×
Glass slides	✓	<b>✓</b>

Equipment	Saraibil	Jaraguri
Cover slips	x	x
Light Microscope	x	✓
Glucometer	×	✓

<sup>\*</sup>Data was collected in March 2022; ✓ Available; × Not available

#### TABLE 2: AVAILABILITY OF FUNCTIONAL EQUIPMENT AT HWCS\* (N=4)

Equipment	Saraibil		Jaraguri	
	Raimona HWC	Janaligaon HWC	Dawaguri HWC	Shimultapu HWC
Basin 825 ml. Ss (Stainless Steel) Ref. IS 3992	✓	✓	✓	✓
Basin deep (capacity 6 litre) ss Ref: IS: 5764 with Stand	×	×	×	×
Tray instrument/Dressing with cover 310 x 195x63mm SS, Ref IS: 3993	×	✓	✓	<b>√</b>
Flashlight/Torch Box-type pre-focused (4 cell)	x	×	×	×
Torch (ordinary)	<b>✓</b>	✓	✓	<b>✓</b>
Dressing Drum with cover 0.945 litres stainless steel	x	✓	✓	×
Hemoglobinometer – set Sahli type complete	×	✓	×	×
Weighing Scale, Adult	✓	✓	✓	✓
Weighing Scale, Infant	✓	✓	✓	✓
Weighing Scale, (baby) hanging type	×	✓	✓	×
Stadiometer	✓	×	✓	×
Sterilizer	×	✓	✓	×
Surgical Scissors straight	×	✓	×	✓
Sphygmomanometer	✓	✓	✓	✓
BP Apparatus (Digital)	×	×	✓	✓
Cheatle's Forceps	×	×	✓	x
Vaccine Carrier	×	✓	✓	✓
Ice pack box	×	✓	×	✓
Sponge holder	✓	✓	✓	✓
Plain Forceps	×	×	✓	✓
Tooth Forceps	×	✓	✓	✓
Needle Holder	✓	✓	✓	✓
Artery Forceps-Curved	×	×	✓	×
Kidney tray	✓	✓	✓	✓
Clinical Thermometer oral	✓	✓	✓	✓
Digital Thermometer	✓	x	✓	×
Talquist Hb scale	×	x	×	×
Stethoscope	✓	✓	✓	✓
Foetoscope	×	x	×	✓

Equipment	Saraibil		Jaraguri	
	Raimona HWC	Janaligaon HWC	Dawaguri HWC	Shimultapu HWC
Hub Cutter and Needle Destroyer	✓	✓	✓	✓
Ambu Bag (Paediatric size) with Baby mask	✓	✓	✓	✓
Suction Machine	✓	✓	✓	✓
Oxygen Administration Equipment	×	×	×	×
Oxygen Cylinder with trolley	×	×	✓	×
Tracking Bag and Tickler Box (Immunization)	×	✓	✓	✓
Measuring Tape	✓	✓	✓	✓
I/V Stand	✓	✓	✓	✓
Nebulizer	×	×	✓	×
Labour Table	✓	✓	✓	✓
Form Mattress	✓	✓	✓	×

<sup>\*</sup>Data was collected in March 2022;

#### TABLE 3: NUMBER OF HEALTH STAFF AT PHCS\* (N=2)

Health staff type	Ith staff type  IPHS <sup>®</sup> recommendation per PHC		PHC	
			Jaraguri	
Medical Officer (MBBS)	1	1	1	
Medical Officer (AYUSH)	1	1	1	
Pharmacist	1	0	1	
Nurse - Midwife (Staff Nurse)	3	3	4	
Health Worker (Female)	1	0	1	
Health Educator	1	0	0	
Health Assistant (Male)	1	0	1	
Health Assistant (Female)	1	0	0	
Clerks	2	1	1	
Laboratory Technician	1	1	1	
Driver	1	1	1	
Class IV	4	2	2	

@Indian public health standard, \*Data was collected in March 2022

<sup>✓</sup> Available;

<sup>➤</sup> Not available

TABLE 4: NUMBER OF HEALTH STAFF IN HWCS\* (N=4)

Personnel		Saraibil		Jaraguri		
	Recommended <sup>a</sup>	Raimona HWC	Janaligaon HWC	Shimultapu HWC	Dawaguri HWC	
Middle Level Health Provider (MLHP)	1	1	1	1	1	
Health Worker (Female)	1 or 2 (Optional)	1	1	1	1	
Health Worker (Male)	1 or 0 (optional; may be replaced by female health worker)	0	1	1 (absent since joining date)	0	
Voluntary worker	1 (optional)	1	1	1	1	

@As per Ayushman Bharat Guidelines, \*Data was collected in March 2022

TABLE 5: NUMBER OF PHCS WITH ESSENTIAL DRUGS\* (N=2)

Drug Type of formulation & Dosage		Saraibil	Jaraguri	
Oxygen	inhalation	×	✓	
Diazepam	Injection 5 mg/ml	×	×	
Acetyl Salicylic Acid	Tablets 300 mg, 75 mg & 50 mg	×	×	
lbuprofen	Tablets 400 mg	✓	✓	
Paracetamol	Injection 150 mg/ml	×	×	
	Syrup 125 mg/5ml	✓	✓	
Chlorpheniramine Maleate	Tablets 4 mg	✓	×	
Dexchlorpheniramine Maleate	Syrup 0.5 mg/5 ml	×	×	
Dexamethasone	Tablets 0.5 mg	×	✓	
Pheniramine Maleate	Injection 22.75 mg/ml	×	×	
Promethazine	Tablets 10 mg, 25 mg	×	×	
	Syrup 5 mg/5 ml	×	×	
	Capsules 250 mg, 500 mg	×	×	
Ampicillin	Capsules 250 mg, 500 mg	×	×	
	Powder for suspension 125 mg/5 ml	×	×	
Benzylpenicillin	Injection 5 lacs, 10 lacs units	×	×	
Cloxacillin	Capsules 250 mg, 500 mg	×	×	
	Liquid 125 mg/5 ml	×	×	
Procaine Benzylpenicillin	Injection Crystalline penicillin (1 lac units) + Procaine penicillin (3 lacs units)	×	×	
Cephalexin	Syrup 125 mg/5 ml	×	×	
Gentamicin	Injection 10 mg/ml, 40 mg/ml	×	×	
Activated Charcoal Powder		×	×	
Anti-snake Venom	Ampoule	×	×	
Carbamazepine	Tablets 100 mg, 200 mg	x	×	

Drug	Type of formulation & Dosage	Saraibil	Jaraguri	
	Syrup 20 mg/ml	×	×	
Phenytoin Sodium	Capsules or Tablets 50 mg,100 mg	×	×	
	Syrup 25 mg/ml	×	×	
Mebendazole	Tablets 100 mg	×	×	
	Suspension 100 mg/5 ml	×	×	
Albendazole	Tablets 400 mg	✓	✓	
Diethylcarbamazine Citrate	Tablets 150 mg	×	×	
Amoxycillin	Powder for suspension 125 mg/5 ml	×	✓	
Glyceryl Trinitrate	Sublingual Tablets 0.5 mg	×	×	
	Injection 5 mg/ml	×	×	
Isosorbide 5 Mononitrate	Tablets 10 mg	×	×	
Propranolol	Tablets 10 mg, 40 mg	×	×	
	Injection 1 mg/ml	×	×	
Amlodipine	Tablets 2.5 mg, 5 mg, 10 mg	✓	✓	
Atenolol	Tablets 50 mg, 100 mg	✓	×	
Enalapril Maleate	Tablets 2.5 mg, 5 mg, 10 mg	×	×	
	Injection 1.25 mg/ml	×	×	
Methyldopa	Tablets 250 mg	×	×	
Tab. Metoprolol	Tablets 25 mg, 50 mg, 100 mg	×	×	
Hydrochlorothiazide	Tablets 12.5, 25 mg	×	×	
Tab. Captopril	Tablets 25 mg	×	×	
Tab. Isosorbide Dinitrate (Sorbitrate)	Tablets 5 mg, 10 mg	×	×	
Benzoic Acid + Salicylic Acid	Ointment or Cream 6%+3%	✓	×	
Miconazole	Ointment or Cream 2%	✓	<b>✓</b>	
Framycetin Sulphate	Cream 0.5%	✓	×	
Neomycin +Bacitracin	Ointment 5 mg + 500 IU	×	×	
Povidone Iodine	Solution and Ointment 5%	✓	✓	
Silver Nitrate	Lotion 10%	×	×	
Nalidixic Acid	Tablets 250 mg, 500 mg	×	×	
Nitrofurantoin	Tablets 100 mg	×	×	
Norfloxacin	Tablets 400 mg	✓	<b>✓</b>	
Tetracycline	Tablets or Capsules 250 mg	×	×	
Griseofulvin	Capsules or Tablets 125 mg, 250 mg	×	×	
Nystatin	Tablets 500,000 IU	×	×	
Metronidazole	Pessaries 100,000 IU	×	×	
	Tablets 200 mg,	×	×	
	400 mg Syrup	×	×	
Dextran	Injection 6%	×	×	
Silver Sulphadiazine	Cream 1%	×	×	
Betamethasone	Cream/Ointment 0.05%	×	×	

Drug	Type of formulation & Dosage	Saraibil	Jaraguri
Dipropionate Calamine	Lotion	×	×
Zinc Oxide	Dusting Powder	×	×
Glycerine	Solution	×	x
Benzyl Benzoate	Lotion 25 %	×	✓
Benzoin Compound	Tincture	×	×
Chlorhexidine	Solution 5% (conc. for dilution)	×	×
Ethyl Alcohol	70% Solution	✓	×
Gentian Violet	Paint 0.5%, 1%	×	×
Hydrogen Peroxide	Solution 6%	×	×
Bleaching Powder	Powder	✓	✓
Formaldehyde IP	Solution	×	×
Potassium Permanganate	Crystals for solution	×	×
Furosemide	Injection, 10 mg/ml	×	×
	Tablets 40 mg	×	×
Aluminium Hydroxide + Magnesium	Suspension	×	×
Hydroxide	Tablet	×	×
Omeprazole	Capsules 10, 20, 40 mg	×	x
Ranitidine Hydrocholoride	Tablets 150 mg, 300 mg	×	x
	Injection 25 mg/ml	×	x
Domperidone	Tablets 10 mg	×	x
	Syrup 1 mg/ml	x	x
Metoclopramide	Tablets 10 mg	x	×
	Syrup 5 mg/ml	×	x
	Injection 5 mg/ml	x	×
Dicyclomine Hydrochloride	Tablets 10 mg	✓	<b>✓</b>
	Injection 10 mg/ml	✓	×
Hyoscine Butyl Bromide	Tablets or 10 mg	×	×
	Injection 20 mg/ml	×	×
Bisacodyl	Tablets/suppository 5 mg	✓	×
Isphaghula	Granules	×	×
Oral Rehydration Salts	Powder for solution as per IP	✓	<b>√</b>
Oral Contraceptive pills	,	<b>√</b>	<b>√</b>
Condoms (Nirodh)		<b>√</b>	<b>√</b>
Copper T (380 A)		<b>√</b>	<b>✓</b>
Prednisolone	Tablets 5 mg, 10 mg	×	×
Glibenclamide	Tablets 2.5 mg, 5 mg	×	×
Insulin Injection (Soluble)	Injection 40 IU/ml	×	×
Metformin	Tablets 500 mg	<b>√</b>	×
Rabies Vaccine	Injection	×	×
Tetanus Toxoid	Injection		<b>√</b>

Type of formulation & Dosage		Saraibil	Jaraguri	
Chloramphenicol Eye Drops	Drops/Ointment 0.4%, 1%	×	×	
Ciprofloxacin Hydrochloride Eye Drops	Drops/Ointment 0.3%	×	✓	
Gentamicin Eye/Ear	Drops 0.3%	✓	×	
Miconazole	Cream 2%	✓	✓	
Sulphacetamide Sodium Eye Drops	Drops 10%, 20%, 30%	×	×	
Tetracycline Hydrochloride Eye ointment	Ointment 1%	×	×	
Prednisolone Sodium Phosphate	Eye Drops 1%	×	×	
Xylometazoline Nasal Drops	Drops 0.05%, 0.1%	×	✓	
Diazepam	Tablets 2 mg, 5 mg, 10 mg	×	×	
Aminophylline	Injection 25 mg/ml	×	×	
Beclomethasone Dipropionate	Inhalation 50 mg, 250 mg/dose	×	×	
Salbutamol Sulphate	Tablets 2 mg, 4 mg	✓	×	
	Syrup 2 mg/5 ml	×	x	
	Inhalation 100 mg/dose	×	×	
Dextromethorphan	Tablets 30 mg	×	×	
Dextrose	IV infusion 5% isotonic 500 ml bottle	✓	<b>√</b>	
Normal Saline	IV Infusion 0.9% 500 ml bottle	✓	<b>√</b>	
Potassium Chloride	Syrup 1.5 gm/5 ml, 200 ml	×	×	
Ringer Lactate	IV infusion 500 ml	×		
Sodium Bicarbonate	Injection	×	×	
Ascorbic Acid	Tablets 100 mg, 500 mg	✓	<b>✓</b>	
Calcium salts	Tablets 250 mg, 500 mg	✓	×	
Multivitamins	Tablets (As per Schedule V)	×	×	
Broad spectrum antibiotic/antifungal	Ear drops	×	×	
Wax dissolving	Ear drops	×	×	
NVP	Tablets and bottle (5 ml)	×	×	
STI syndromic treatment kit	As per Need	×	×	
Clofazimine	Tablets 100 mg (loose)	×	×	
Anti-rabies vaccine		×	×	
Vitamin A		×	×	
Emergency drug kit to manage Anaphy	laxis and other AEFI			
Inj. Adrenaline		×	x	
Inj. Hydrocortisone		✓	<b>✓</b>	
Inj. Dexamethasone		×	x	
Ambu bag (Paediatric)		×	<b>✓</b>	

TABLE 6: NUMBER OF HWCS WITH ESSENTIAL DRUGS\* (N=4)

Drug	Drug Formulation Type & Dosage	Saraibil	Saraibil		Jaraguri	
		Raimona HWC	Janaligaon HWC	Dawaguri HWC	Shimultapu HWC	
General anaesthetic and oxy	ygen	,	1	1	'	
Oxygen	Inhalation	<b>✓</b>	×	×	×	
Local anaesthetics	<u>'</u>	'	'	'	'	
Lignocaine	Topical forms 2-5%	×	✓	✓	×	
Analgesics, antipyretics, nor	n-steroidal anti-inflammatory n	nedicines		'	'	
Diclofenac	Tablet 50 mg	×	✓	✓	✓	
	Injection 25 mg/ml	×	<b>✓</b>	×	✓	
Paracetamol	Tablet 500 mg	✓	×	✓	✓	
	Tablet 650 mg	<b>✓</b>	✓	x	<b>√</b>	
	All licensed oral liquid dosage forms and strengths	×	✓	x	<b>√</b>	
Anti-allergic and medicines	used in anaphylaxis					
Cetrizine	Tablet 10 mg	×	✓	✓	✓	
Chlorpheniramine	Tablet 4 mg	×	×	×	×	
	Oral liquid 2 mg/5 ml	×	x	x	×	
Intestinal Anti helminthes						
Albendazole	Tablet 400 mg	✓	✓	✓	✓	
Diethyl carbamazin (Antifilarial)	Tablet 100 mg	×	x	×	×	
Anti-bacterial						
Ciprofloxacin	Tablet 250 mg	×	×	×	×	
	Tablet 500 mg	×	<b>✓</b>	×	✓	
Gentamicin	Tablet 500 mg	×	x	×	×	
	Injection 10 mg/ml	×	x	×	×	
	Injection 40 mg/ml	×	x	×	<b>√</b>	
Metronidazole	Tablet 200 mg	×	×	×	×	
	Tablet 400 mg	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>	
Amoxicillin	Capsule 250 mg	×	<b>✓</b>	×	<b>✓</b>	
	Capsule 500 mg	<b>✓</b>	✓	×	<b>✓</b>	
	Oral liquid 125 mg/5 ml	×	<b>✓</b>	<b>√</b>	<b>√</b>	
	Oral liquid 250 mg/5 ml	<b>✓</b>	x	x	x	
Anti-fungal	,					
Fluconazole	Tablet 100 mg	x	×	×	×	
	Tablet 150 mg	×	×	<b>√</b>	×	
Anti-Malarial	, and the second					
Chloroquine	Tab 150 mg	<b>✓</b>	<b>✓</b>	×	×	
Primaquine	Tablet 2.5 mg	<b>✓</b>	x	×	x	

Drug	Drug Formulation Type & Dosage	Saraibil		Jaraguri	
		Raimona HWC	Janaligaon HWC	Dawaguri HWC	Shimultapu HWC
Artesunate (A) + Sulphadoxine –Py-rimethamine (B). Combi pack (A+B)	1 Tablet 25 mg (A) + 1 Tablet (250 mg + 12.5 mg) (B)	x	x	x	x
	1 Tablet 50 mg (A) + 1 Tablet (500 mg + 25 mg) (B)	x	×	x	x
	1 Tablet 100 mg (A) + 1 Tablet (750 mg + 37.5 mg) (B)	x	x	x	x
	1 Tablet 150 mg (A) + 2 Tablet (500 mg + 25 mg) (B)	x	×	x	x
	1 Tablet 200 mg (A) + 2 Tablet (750 mg + 37.5 mg) (B)	x	x	x	x
Anaemia					
Ferrous salts	Tablet equivalent to 60 mg of elemental iron	x	✓	<b>√</b>	<b>√</b>
	30 Oral liquid equivalent to 25 mg of elemental iron/ml	x	✓	<b>√</b>	✓
Ferrous salt (A) + Folic acid (B)	Tablet 45mg elemental iron (A) +400 mcg (B)	x	×	x	x
	32 Tablet 100 mg elemental iron (A) + 500 mcg (B)	x	×	x	x
	Tablet 60mg elemental iron (A) +0.5mg (B)	✓	✓	<b>✓</b>	✓
	33 Oral liquid 20 mg elemental iron (A) + 100 mcg (B)/ml	x	✓	✓	x
Folic acid	Tablet 5 mg	✓	✓	✓	✓
Dermatological medicines (To	opical)		1		
Clotrimazole	Cream 1%	x	x	<b>✓</b>	✓
Methylrosanilinium chloride (Gentian Violet)	Topical preparation 0.25% to 2%	x	×	×	×
Povidone iodine	Solution 4% to 10%	x	✓	<b>✓</b>	✓
Silver sulphadiazine	Cream 1%	✓	x	×	x
Framycetin	Cream 0.5%	x	✓	×	x
Disinfectants and antiseptics					
Ethyl alcohol (Denatured)	Solution 70%	×	×	×	×
	Solution 95%	×	✓	✓	×
Hydrogen peroxide	Solution 6%	×	x	×	×
Bleaching powder	Containing not less than 30% w/w of available chlorine	x	×	x	x
Potassium permanganate	Crystals for topical solution	×	x	×	×
Gastrointestinal medicines					
Ranitidine	Tablet 150 mg	×	x	x	✓
Domperidone	Tablet 10 mg	×	×	×	✓

Drug	Drug Formulation Type & Dosage	Saraibil		Jaraguri	
		Raimona HWC	Janaligaon HWC	Dawaguri HWC	Shimultapu HWC
Dicyclomine	Tablet 10 mg	×	x	×	✓
Oral rehydration salts	As licensed	<b>✓</b>	✓	✓	✓
Zinc sulphate	Dispersible Tablet 20 mg	x	<b>✓</b>	✓	×
Contraceptives			'		
Ethinylestradiol (A) + Norethisterone	Tablet 0.035 mg (A) + 1 mg (B)	x	×	✓	✓
Hormone releasing IUD	Contains 52 mg of Levonorgestrel	×	×	✓	✓
IUD containing Copper	As licensed	✓	×	✓	✓
Condom		<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>√</b>
Ethinylestradiol	Tablet 0.01 mg	x	x	x	×
	Tablet 0.5 mg	×	x	x	x
Levonorgestrel	Tablet 0.75 mg	×	×	×	×
Anti-infective medicine					
Ciprofloxacin	Drops 0.3 %	×	x	×	<b>√</b>
<u> </u>	Ointment 0.3%	x	×	×	×
Oxytocics and Antioxytocics					
Methylergometrine	Tablet 0.125 mg	<b>✓</b>	✓	✓	✓
Misoprostol	Tablet 100 mcg	<b>✓</b>	✓	<b>✓</b>	✓
Vitamins and minerals					
Ascorbic acid (Vitamin C)	Tablet 100 mg	×	×	×	×
Cholecalciferol	Tablet 1000 IU	x	x	×	×
	Tablet 60000 IU	×	x	×	×
	Oral liquid 400 IU/ml	×	x	×	×
Vitamin A	Capsule 5000 IU	×	x	×	×
	Capsule 50000 IU	x	x	×	×
	Capsule 100000 IU	x	x	×	×
	Oral liquid 100000 IU/ml	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>
Phytomenadione (Vitamin K1)	Injection 10 mg/ml	<b>✓</b>	<b>√</b>	<b>✓</b>	<b>✓</b>
Analgesics					
Acetylsalicylic Acid	Tablet 300 mg to 500 mg	×	×	×	×
	Effervescent/ Dispersible/ Enteric coated Tablet 300 mg to 500 mg	x	×	x	x
lbuprofen	Tablet 200 mg	×	×	×	<b>√</b>
	Tablet 400 mg	<b>✓</b>	<b>✓</b>	<b>√</b>	<b>√</b>
	Oral liquid 100 mg/5 ml	×	×	×	×
Mefenamic acid	Capsule 250 mg	×	×	×	×
	Capsule 500 mg	×	<b>✓</b>	×	x

Drug	Drug Formulation Type & Dosage	Saraibil		Jaraguri	
		Raimona HWC	Janaligaon HWC	Dawaguri HWC	Shimultapu HWC
Emergency Medicine Kit					
1. Inj. Adrenaline		✓	× (expired)	✓	×
2. Inj. Hydrocortisone		✓	× (expired)	✓	×
3. Inj. Dexamethasone		✓	× (expired)	✓	✓
4. Glyceryl trinitrate- Sublingual tablet 0.5 mg		×	×	×	x

<sup>\*</sup>Data was collected in March 2022, 

Available 

Not available



## **Snapshots of IEC materials**

#### Why child marriage is harmful? The George

#### informal union of a girl or a boy before age of 18 years

Child marriage is defined as both formal marriages and



What is child marriage?

Education is interrupted & loosing earning potential

OSSAIG



Health risk due to early pregnancy to both mother and child



Disruption of normal childhood and personal development



The George Institute for Global Health, India in collaboration with National Health Mission, Kokraihar, Assam

High risk of sexual and physical violence



Risk of developing stress related physical and mental disorder

- » Like girls, boys in the union or marriage may also enter into early fatherhood resulting in taking up adult responsibilities and additional financial burden
- » Early marriage and fatherhood may also constrain the boys education and job opportunities

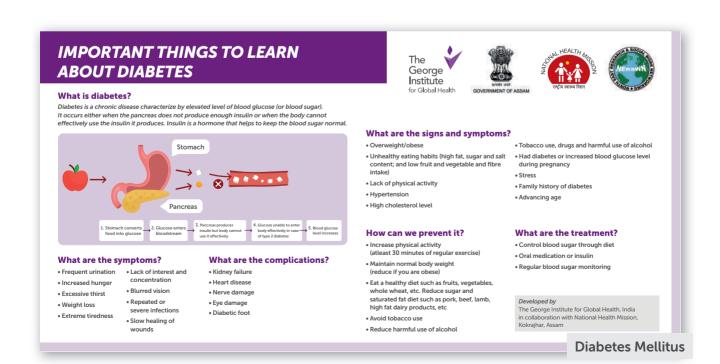
**Early Marriage and its Implications** 

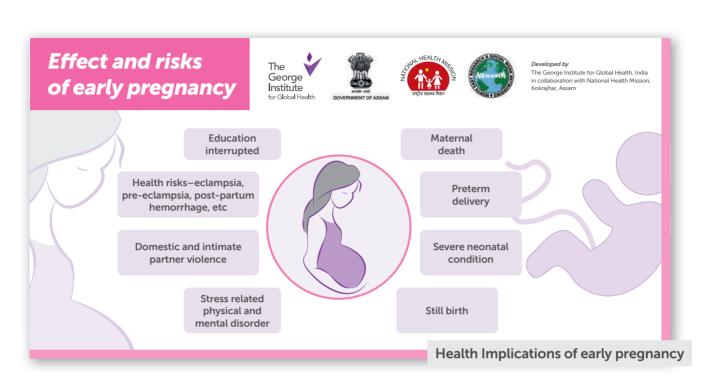


Gestational diabetes mellitus & Postnatal care



#### Antenatal care & Safe Abortion







Institutional delivery & Safe abortion

## **IEC Activities**









# Improving health care access and quality in the context of achieving Universal Health Coverage among scheduled tribes:

Implementation research in Kokrajhar, Assam

#### Key findings and recommendations

October 2020 - June 2022





