A Study on Referral Mechanism of Pregnant Women in Kandhamal District, Odisha

by

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Background

- Kandhamal District, home to “Kutia kondh” tribe, is a hilly district in Odisha.

- With MMR of 245 , IMR of 82 and U5MR of 145 [AHS 2013] it has been categorized as a High Focus District. Most of the deaths are attributed to direct obstetrics causes.

- A *referral* can be defined as any process in which health care providers at lower levels of the health system, who lack the skills, the facilities, or both to manage a given clinical condition, seek the assistance of providers who are better equipped or specially trained to guide them in managing or to take over responsibility for a particular episode of a clinical condition in a patient. (Al-Mazrou, Al-Shehri, and Rao 1990)

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- DHH (government hospital) being a first referral center and easily accessible to people, it is perceived to be a convenient place to seek secondary level health services.

- It worsens the conditions in state like Odisha with the presence of already inadequate infrastructure and human resource. (NRHM evaluation study 2011)

- Based on the three delay model of maternal death, an effort has been made to understand the perception of patient, referral system mechanism and preparedness of the facilities for obstetrics care.

Literature Review

- Chaturvedi S. (2014) concluded in her paper that secondary level facilities received few referrals, while referrals were made directly to district hospitals. She found that adjusted odds for adverse birth outcomes were twice among those referred than those not referred (AOR 2.6, 95% CI 1.1-6.6.

- An evaluation study of NRHM (2011) stated that in Odisha greater patient load has been noted in DHs, SDHs and CHCs as compared to PHCs and SCs. This could be higher referred cases from lower level primary health facilities to higher/secondary level health facilities.

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- A study on "Effectiveness of referral system for antenatal and intrapartum problems in Gutu district, Zimbabwe" stress on proper antenatal identification of appropriate risk factor, referral and its compliance to decrease intra-partum emergency referral. It suggest that referral criteria need to be reviewed constantly in order to reduce unnecessary referral.

- Caretakers may be faced with a number of barriers before they comply with referral advice. The relative importance of these barriers is presently unknown to public health planners consequently, interventions to improve caretaker compliance with referral are difficult to develop.

Research Question

- What is the facility based referral mechanism of pregnant women in Kandhamal district of Odisha?
- What is the institutional preparedness for assured basic obstetric care services in Kandhamal district of Odisha?
- What is the perception of pregnant women for service availability and its utilization in Kandhamal district of Odisha?

Objectives

- To explore the facility based referral mechanism of pregnant women in Kandhamal district of Odisha.
- To assess the institutional preparedness for assured basic obstetric care services in Kandhamal district of Odisha.
- To study the perception of pregnant women for service availability and it quality in Kandhamal district of Odisha.

Methodology

Sources of data:

1. **Quantitative data:**

- Personal interview of Medical Officer (MO)/ Lady Health Visitor (LHV)/ MO In charge/Staff Nurses/ANM at CHC or PHC
- Secondary data from DHH obtained and analyzed

2. **Qualitative data:** Personal interview of mothers who delivered their child at DHH in the month of January & February.

Tool used: Semi structured questionnaire

Study design: Exploratory study

Study duration: 3 months

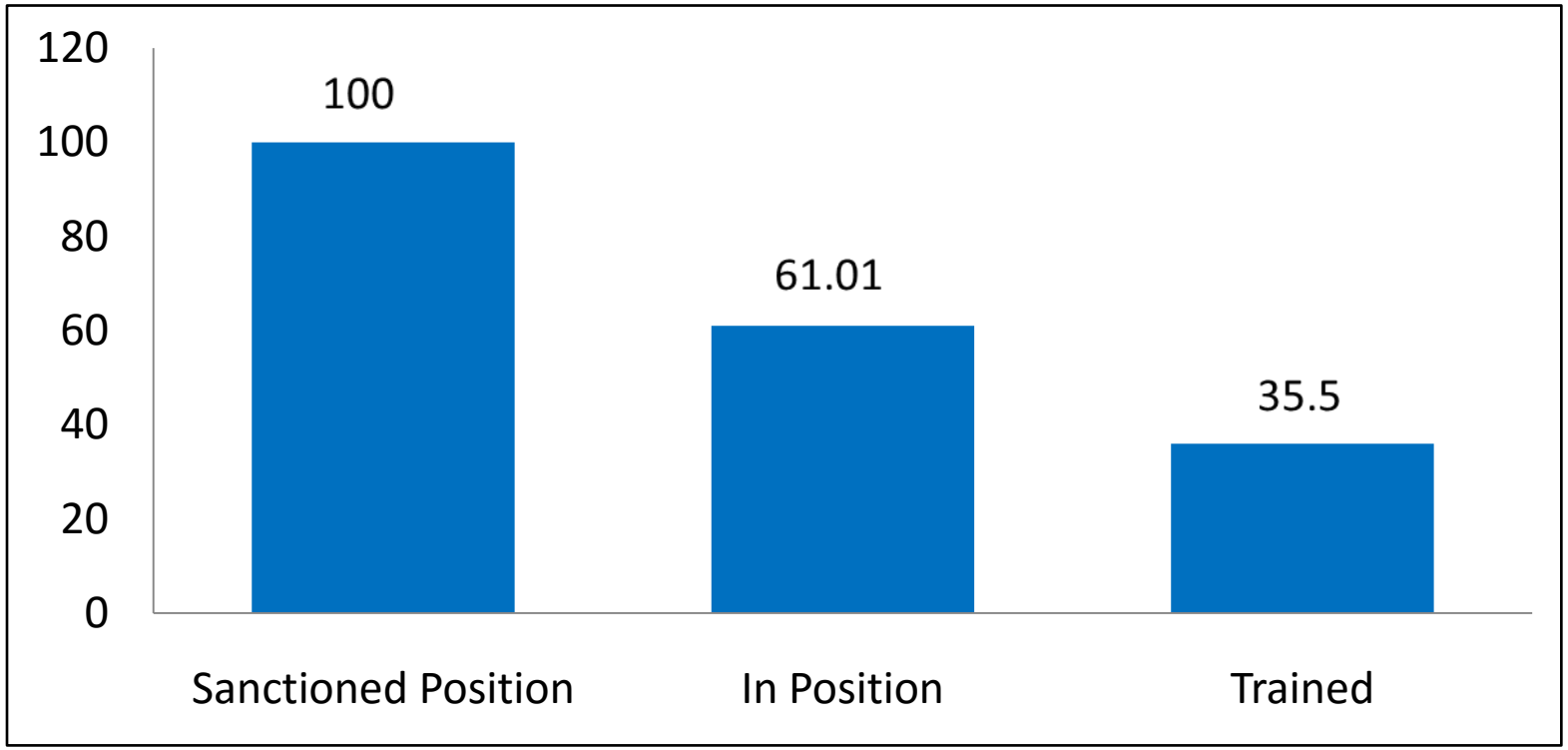
Study setting: Kandhamal district of Odisha

Sampling

- **Sampling technique:** purposive sampling
- **Selection of respondent:** Willing to reply and ready to participate service providers (MO/LHV/SN/ANM) and mothers
- **Selection of Institutions:** Majority of delivery cases (31%) came from three blocks G. Udayagiri, Khajuripada & Phiringia.
- **Sample size :** 61 cases were randomly selected from the three blocks. Facility assessment of all the delivery points (6) in three blocks
- **Technique :** Personal interview of key service providers (MO/LHV/SN/ANM) and selected mothers
- **Tool :** Semi structured questionnaire

Sanctioned Position Vs In Position

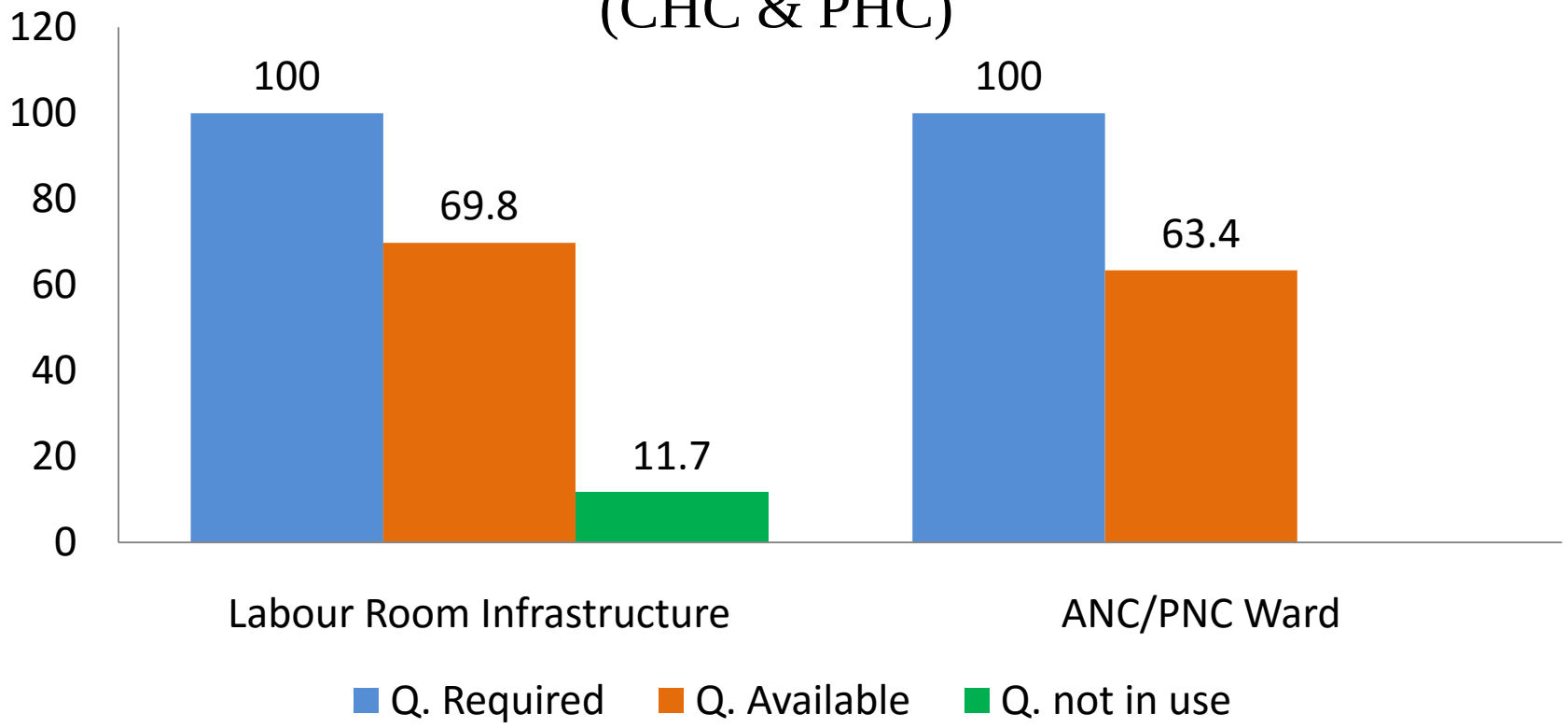
(CHC & PHC)



Human Resource		n=59
SP	IP	Trained
100 %(59)	61.01% (36)	35.5% (21)

Infrastructure Availability

(CHC & PHC)



Labour Room Infrastructure			ANC/PNC Ward		
Quantity Required	Quantity Available	Quantity not in use out of available quantity	Quantity Required	Quantity Available	Quantity not in use out of available quantity
100% (255)	69.8% (178)	11.7% (31)	100% (123)	63.4% (78)	0

Other findings: 44.92% (62) of drugs were available out of the required amount i.e. 138.

Demographic Profile of the Pregnant Women

n=61

Indicators	Particulars	Frequency	Percentage
AGE (in completed years)	Below 20	16	26.23
	21 - 25	22	36.07
	26 - 30	14	22.95
	31 - 40	7	11.48
	41-45	2	3.28
RELIGION	Hindu	59	96.72
	Christian	2	3.28
CASTE	SC	19	31.15
	ST	26	42.62
	OBC	15	24.59
	General	1	1.64
INCOME	APL	12	19.67
	BPL	49	80.33
EDUCATION	Uneducated	4	6.56
	Primary education	43	70.49
	Secondary education	14	22.95

Transportation Details

n= 61

S.no	Details of transportation	Frequency	Percentage
	TYPE OF VEHICLE		
1	Ambulance (102/108)	29	47.5
2	Hired vehicle	28	45.9
3	Own vehicle	3	4.9
4	Public transport	1	1.6
	REASON FOR NOT USING AMBULANCE		
1	Persons used ambulance	29	47.54
2	Called but didn't come in time	26	42.62
3	Have our own vehicle	1	1.64
4	Can easily get hired vehicle	5	8.20

Other findings: Only 48% (29) of total respondents (61) received the drop back facility

Referral Details

(pregnant women referred to DHH at the time of delivery) **n=31**

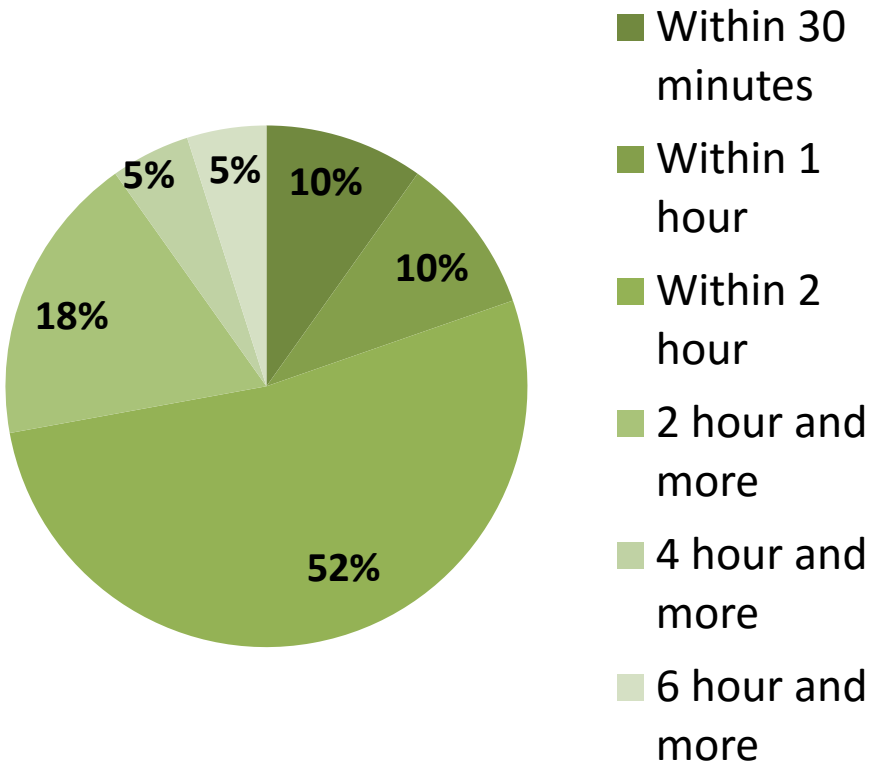
S.no	Referral details	Frequency	Percentage
	AT WHAT POINT REFERRAL WAS MADE		
1	Before entering the Hospital	8	25.8
2	After examination before admission	20	64.5
3	After delivery	3	9.7
	PREVIOUS SIGNIFICANT OBSTETRIC HISTORY		
1	LSCS	2	6.45
2	Abortion	1	3.23
3	None	28	90.32
	OBSTETRIC COMPLICATION		
1	PROM - Premature Rupture of Membrane	1	3.22
2	Retained Placenta	3	9.68
3	None	27	87.1

Other findings:

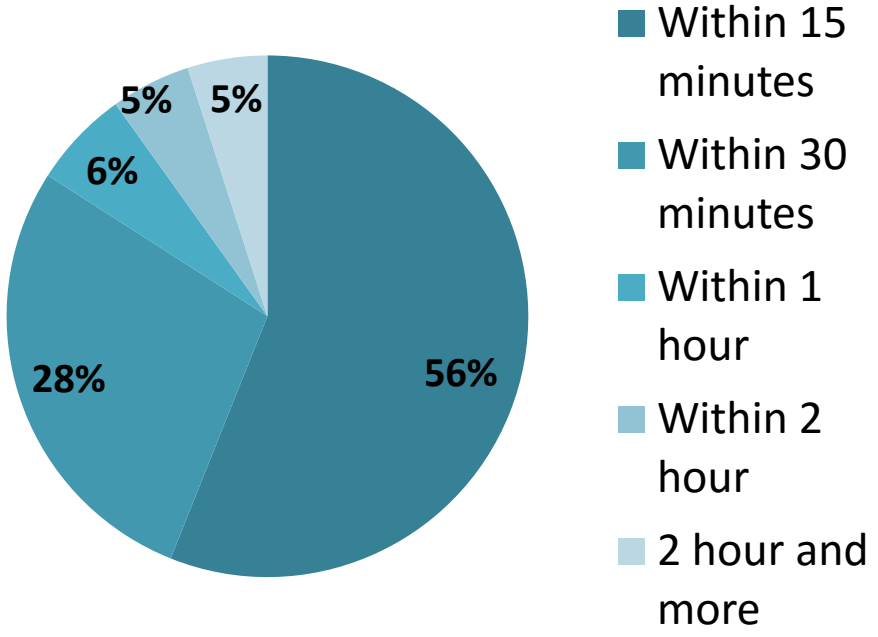
- 45% of the pregnant women received any treatment before referral was made.
- 71% of the respondents received the referral slip.
- Referral in and out register, Reporting of referred cases to block/district/state and
- Follow up of referred cases was not being done on any of the facility visited.

Time lost in seeking health services at the time of emergency

TIME TAKEN TO REACH DHH



TIME TAKEN TO START TREATMENT



Findings:28% of patients required 2 or more than 2 hours to reach DHH. In addition 44% of patient received treatment in 30 and more than 30 minutes

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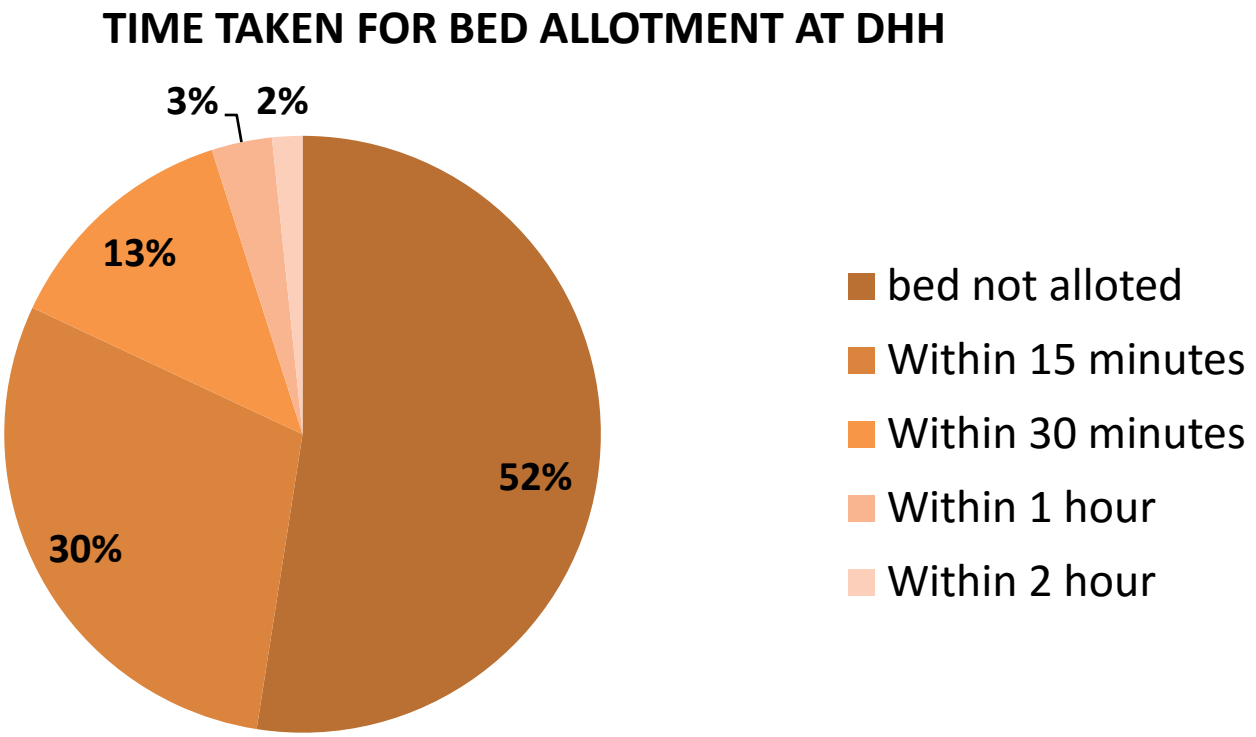
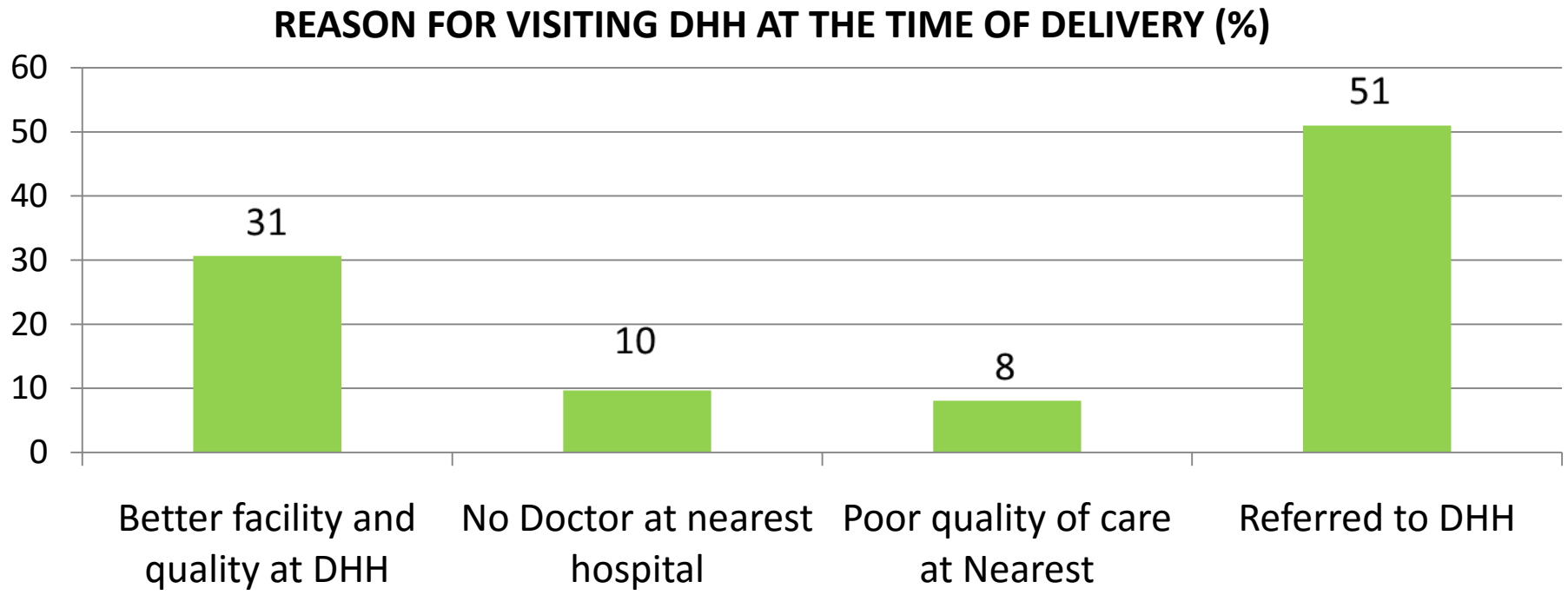


Findings: 52% of patients did not get the bed ticket.
30% received the service within 15 minutes.
18% of patient received the services within 30 or more than 30 minutes.

Perception Of Pregnant women for service availability and its quality

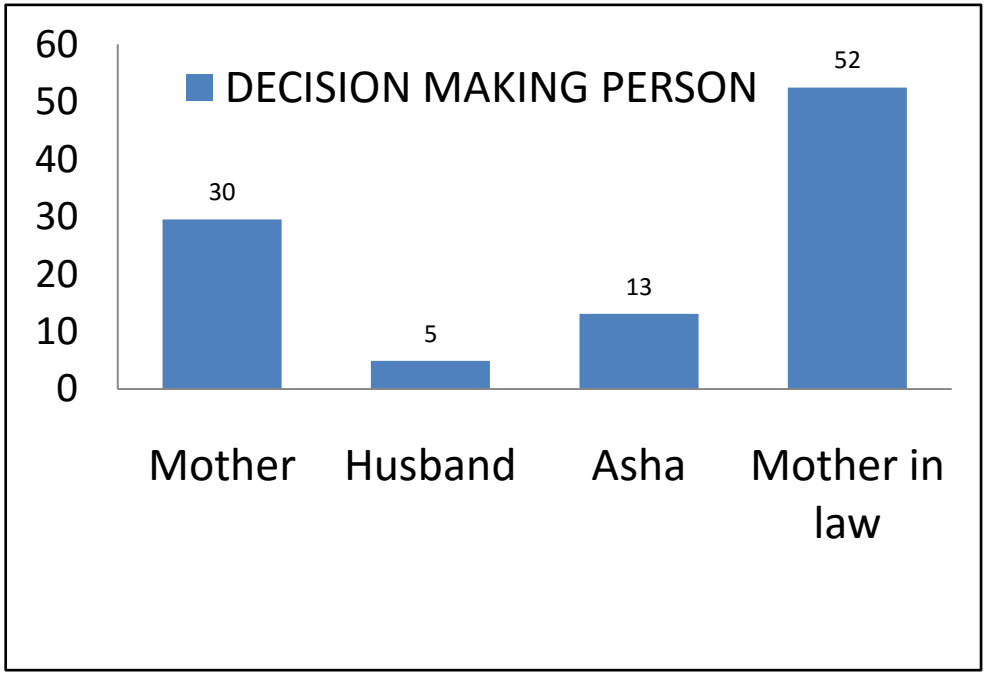
n=61



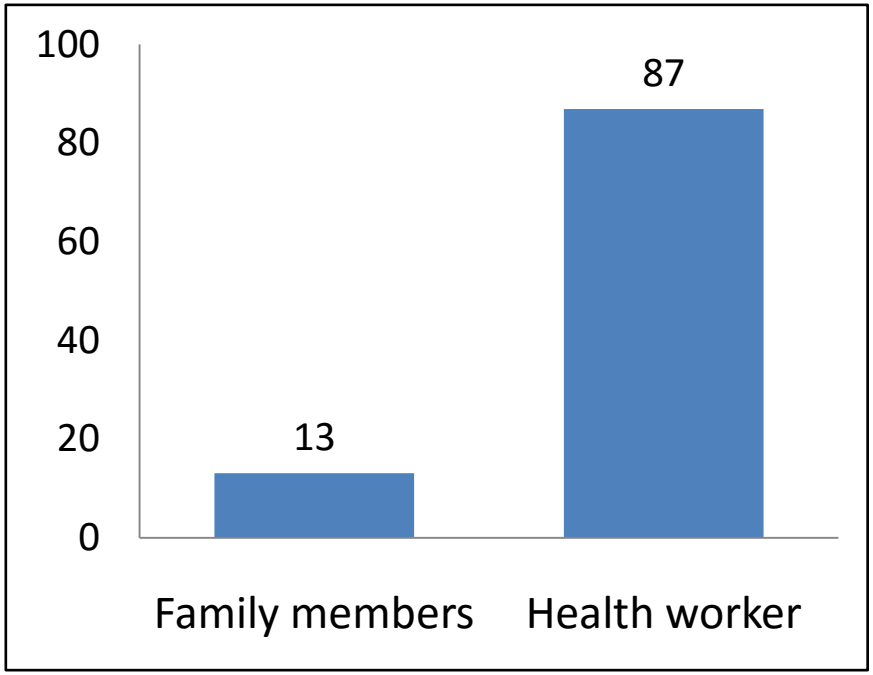
PREGNANT WOMEN WHO VISITED NEAREST DELIVERY POINT DURING DELIVERY PERIOD		
	Frequency	Percentage
Yes	58	95.08
No	3	4.91

REASON FOR VISITING DHH AT THE TIME OF DELIVERY			
S.no	Reasons	Frequency	Percent
1	Better facility and quality at DHH	19	31
2	No Doctor at nearest hospital	6	10
3	Poor quality of care at Nearest	5	8
4	Referred to DHH	31	51

Decision making person



Person for motivation



DECISION MAKING PERSON		
	Frequency	Valid Percent
Mother	18	30
Husband	3	5
Asha	8	13
Mother in law	32	52

	PERSON FOR MOTIVATION	
	Frequency	Valid Percent
Family members	8	13
Health worker	53	87

limitations

1. Time bound
2. Language barrier
3. Cultural limitation
4. LWE Affected district

Major Findings

Objective	Indicators	Findings
Facility assessment	HR Infrastructure Drugs and consumables	HR: 35% of available staff is BmoC, NSSK & SBA trained LR:70% of the required infrastructure is available but 12% is still lying unused Drugs: Not even half of the essential drugs are available at primary delivery centers
Referral System	Details of referral Referral records Reporting	Non-availability of Systemic documentation of referred cases. 4/6 service facilities found without referral slips Cause of referral of 7 cases out of 31 referred was documented.
	Transportation	47% of the patients received the ambulance service 43% called but could not get the service in time
	Lost of time	Almost 5% of patients faced the delay of more than 4 hours at the time of emergency
Perception of patients	Patients preferred DHH at the time of emergency over the nearby delivery facility. Although there is delay in service delivery at DHH too but presence of doctors and other facilities take an edge on other factors	

Recommendations

- Kandhamal is an HPD, HR availability should be enhanced to provide required services. Retired medical officers and gynecologist in administrative positions could also be involved in clinical practices.
- Newly recruited MO and SN are yet to be trained
- Strengthening referral system: Monthly documentation and reporting of details of referred cases at block/district/state level.
- Hand holding support with other development partners and NGOs
- Up gradation of CHC & PHCs in PPP mode
- Availability of more ambulances (102)/alternate transport vehicles exclusively for pregnant women and child.
- Patient feedback mechanism based on the three delays for pregnant women at every delivery point.

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Case study of a pregnant women

- *Kalpana Pradhan (age 23years)*

She lived in the campus of CHC phiringia block and was full in term when reached labour room at the time of delivery. She delivered her child at 3:40pm but was diagnosed with an obstetric complication of retained placenta. Emergency treatment (inj Oxitocin) was administered and was immediately referred to DHH Phulbani. Called ambulance at 4:10 pm. Ambulance came at 4:45pm. She reached DHH at 5:45pm. A saline drip was immediately started and specialist was informed. She came to see the patient at 9:45 pm and patient was already dead.

Thank you