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REPRODUCTIVE HEALTH CARE-SERVICE AVAILABILITY MAPPING AT COMMUNITY HEALTH CENTERS OF A DISTRICT OF WESTERN INDIA

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ABSTRACT

Background: Conducting a comprehensive situation analysis of the district can be seen as a step in the collection and use of information. A well documented situation analysis is helpful in a number of ways. The objective of research was; to prepare Service Availability Map for selected components of reproductive health care provided by various health care facilities of a District of Western India.

Methods: After planning and sensitization of team members, the first step was to prepare map for Reproductive Health Care Services availability in the rural district. A meeting was held at Chief District Health Officer's (CDHO) office with all Taluka Health Officers (THOs) and they were informed about the study and proforma was given to them enlist all health facilities providing health services in their respective talukas.

Results: There were only 37% functional delivery points in the government health facilities Two third PHCs and not all CHCs provided delivery services and only 4 of them provide LSCS services. 87% of LSCS service was provided by private sector. Service Availability Mapping shows that in tribal Talukas especially during monsoon season or where road conditions are poor patient may be required to travel for more than one hour.

Conclusion/Recommendations: Service availability mapping (Computerized SAM and GIS mapping) should be carried out as a rapid assessment tool to generate information on the availability of specific health services, health infrastructure and human resources for each district. There is a need of up gradation of existing CHCs keeping in the view of IPHS norms.

Key words: Community Health Centre, Map, Public Health System, Reproductive Health, Situational Analysis, Service Availability Mapping

Introduction: A Service Availability Mapping (SAM) for reproductive health care of a district describes and analyses the situation regarding the reproductive health status and reproductive health (RH) services of a district. Information about different aspects of reproductive health and the reproductive health services is collected, in order to provide an overall picture of the district. At the district level, the SAM is primarily an assessment of the extent to which health services address reproductive health care needs. Conducting a comprehensive situation analysis of the district can be seen as a step in the collection and use of information. A well documented situation analysis is helpful in a number of ways.⁽¹⁾ This new technique for collecting health-related information would play a specific role in the monitoring and evaluation process. In this respect SAM objectives are to: Provide planners and decision-makers with information on the distribution of services within the district, with a focus on the Primary Health Care (PHC) level; Provide baseline monitoring information for increasing the provision of key services such as RH care; and Assess whether the facility SAM can become a useful and feasible planning and monitoring tool at the district level. Taking into consideration the above objectives, SAM tools are intended to periodically provide information that is required to respond to health-system management problems. Responding to SAM warning signals requires detailed investigation of underlying factors contributing to health system management problems. The

investigation may include gathering information from other sources such as health management information systems, sentinel surveillance systems, operation research and surveys.

Maps: Situational analysis is an approach to research using a grounded theorizing methodology to identify and describe social worlds and arenas of action and by representing complexity through mapmaking.⁽²⁾ Every situation analysis should also include a map of the district in order to understand the context. Physical features such as roads, rivers, towns and health facilities are important features to mark on the map. A map also encourages people to think of the district as a single unit, and is an invaluable tool for planning. Other ways of presenting information like graphs, charts, tables can also be used.⁽¹⁾ Service Availability Mapping (SAM) was carried out as there was no information available from the district as to how the RHC services were distributed Figure 1. This mapping included rapid assessment tool that generates information on the availability of specific health services, health infrastructure and human resources for each district. The purpose of this paper is to describe situational analysis as a newer research method for studying complex public health systems, to illustrate the potential of this methodological approach for public health systems and services research.

The objective of research was; to prepare Service Availability Map for selected components of reproductive health care provided by various health care facilities of the District of Western India. Community

Health Centre is very critical component of health care delivery system in India. It works as a first referral unit. In India there is three tier health care delivery model established by the Government. The first tier comprises of Sub Centre, Primary Health Centre (PHC) and CHC. Second tier comprises of Sub District and District Hospital and third tier is tertiary care center or Medical College affiliated Hospital. (3)

Methods: Planning; As a part of the planning for the study, table top discussions and brainstorming meetings with faculty members were conducted to sensitize them about as well as to mobilize their support and cooperation for the study. All necessary permissions from appropriate authorities were obtained. The first step was to prepare map for Reproductive Health Care Services availability in the rural district. A meeting was held at Chief District Health Officer's (CDHO) office with all Taluka Health

Officers (THOs) and they were informed about the study and proforma was given to enlist all health facilities providing health services in their respective talukas. At the time of study there were 12 Talukas and 17 CHCs in the District, majority of the CHCs were located at Taluka head quarter. All of them were included for studying during May 2013 to October 2013.

Results:

There were a total of 97 health facilities (17 CHCs and 80 PHCs) that catered to the health needs of population of around 26 lakhs. Out of these 97 facilities, 3 CHCs (Jabhugam, Mota Fofalia and Gola Gamdi) and 1 PHC (Chansad) were brought under the Public Private Partnership Scheme. There were 32 private health facilities where deliveries were conducted. Total Delivery Points were $97 + 32 = 129$

Table 1: Taluka wise distribution of Delivery Points in the District studied

NAME OF TALUKA	Total Delivery Point CHC + PHC + Private	Private Facility Where Deliveries Are Conducted	No. of Beds in Private	Functional Delivery Point PHC	Functional Delivery Point CHC	PHC Where Delivery Takes Place	Total Functional Delivery Point	Total Delivery Point CHC + PHC
CHHOTA UDEPUR	7	1	30	2	2	4	4	6
DABHOI	9	5	55	2	1	3	3	4
KARJAN	9	5	30	1	1	3	2	4
KAWANT	8	1	15	2	1	6	3	7
NASWADI	6	1	10	2	1	4	3	5
PADARA	8	4	45	2	1	3	3	4
PAVIJETPUR	11	2	18	3	1	7	4	9
SANKHEDA	9	4	52	3	0	4	3	5
SAVALI	6	2	29	2	1	3	3	4
SHINOR	3	0	0	0	1	2	1	3
VADODARA	11	4	20	3	2	5	5	7
WAGHODIA	7	3	110	1	1	3	2	4
TOTAL	94	32	414	23	13	47	36	62

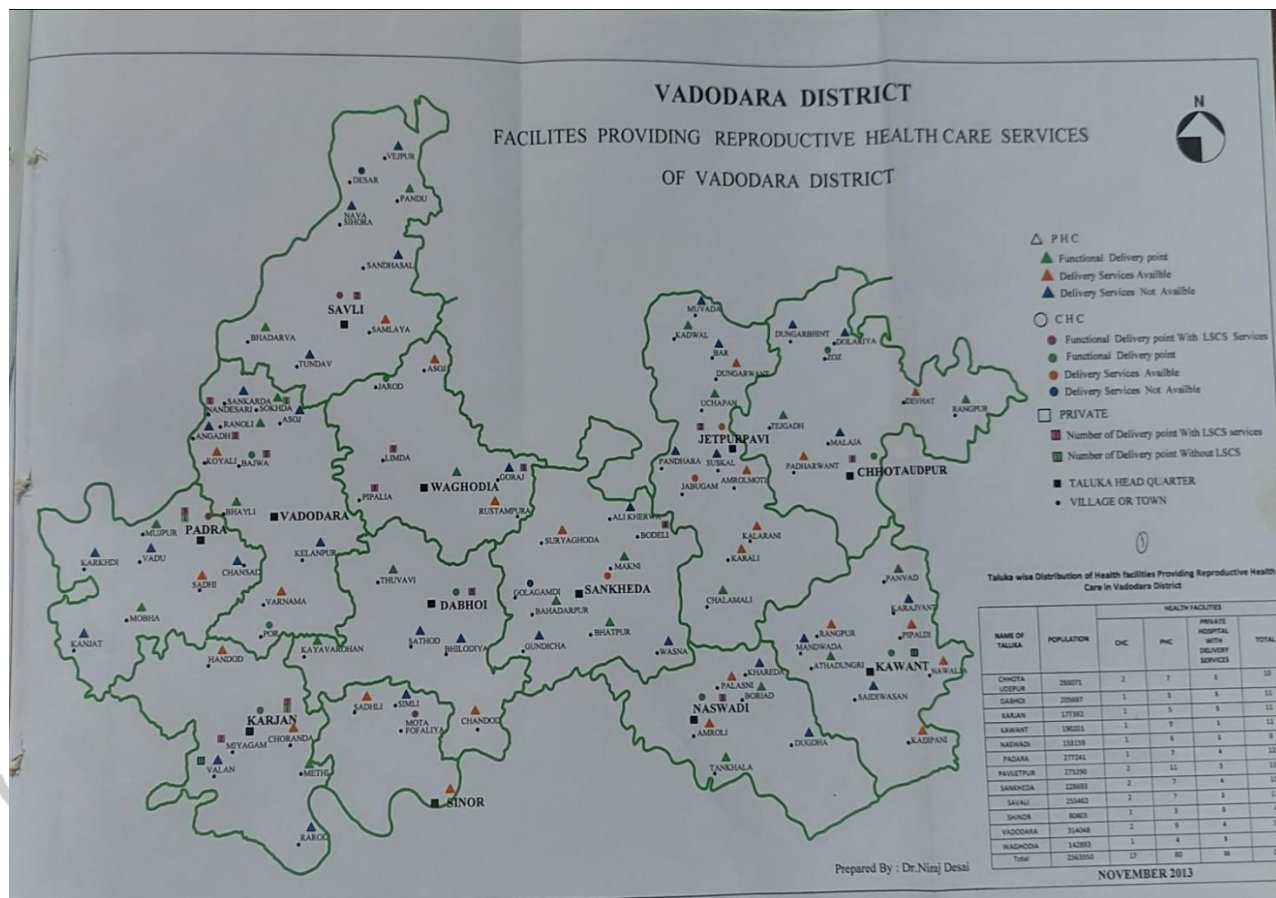
Table 1, shows the distribution of the total available facilities in terms of Functional Delivery Points (FDP).⁽⁴⁾ Out of the total facilities, there were 36/97 (37%) FDP in the Government setup as per Government of Gujarat guidelines of FDP. There were a total of 80 PHCs out of which only 47 (59 %) provided delivery services, which shows poor utilization of infrastructure and manpower. Out of the 17 CHCs, 15 CHCs provided delivery services. This hampers the accessibility of services to the beneficiaries which are highly undesirable.

It adversely impacts health seeking behavior adding on out of pocket expenditures. There were 32 private health facilities where deliveries were conducted. Most of these delivery points were located at the Taluka Headquarters except 10 DP which were located at places other than Taluka Headquarters. Out of the total private facilities, only 5 were located in high focus tribal talukas. 4 out of 5 had facilities to conduct Caesarian sections. This shows a dearth of private facilities in areas where delivery facilities are required

the most. The table shows cumulative number of beds in the private delivery points in each Taluka. The number of beds range from 10 to 110, with no bed available at Shinor Taluka, as it does not

have any private facility. As all the 3 facilities in Waghodia Taluka were tertiary care facilities, it had the maximum number of beds.

Figure 1. Reproductive Health Care-Service Availability Mapping at Community Health Centers of the



District

**Table: 2 Taluka wise Distribution of Facilities conducting
Cesarean Section (CS)**

NAME OF TALUKA	NUMBER OF LSCS POINT IN PRIVATE	NUMBER OF LSCS POINT IN GOVERNMENT	TOTAL LSCS POINT
CHHOTA UDEPUR	1	0	1
DABHOI	5	0	5

KARJAN	3	0	3
KAWANT	0	0	0
NASWADI	1	0	1
PADRA	3	1	4
PAVIJETPUR	2	1	3
SANKHEDA	4	0	4
SAVALI	2	1	3
SHINOR	0	1	1
VADODARA	3	0	3
WAGHODIA	3	0	3
TOTAL	27	4	31

As evident from Table.2, out of 12 Talukas, only 4 Talukas had a single Government facility conducting CS. Apart from Kawant Taluka, all other Talukas had at least 1 govt. or private facility performing CS. So this area of maternal care needs more emphasis from govt. side and more so in Kawant Taluka.

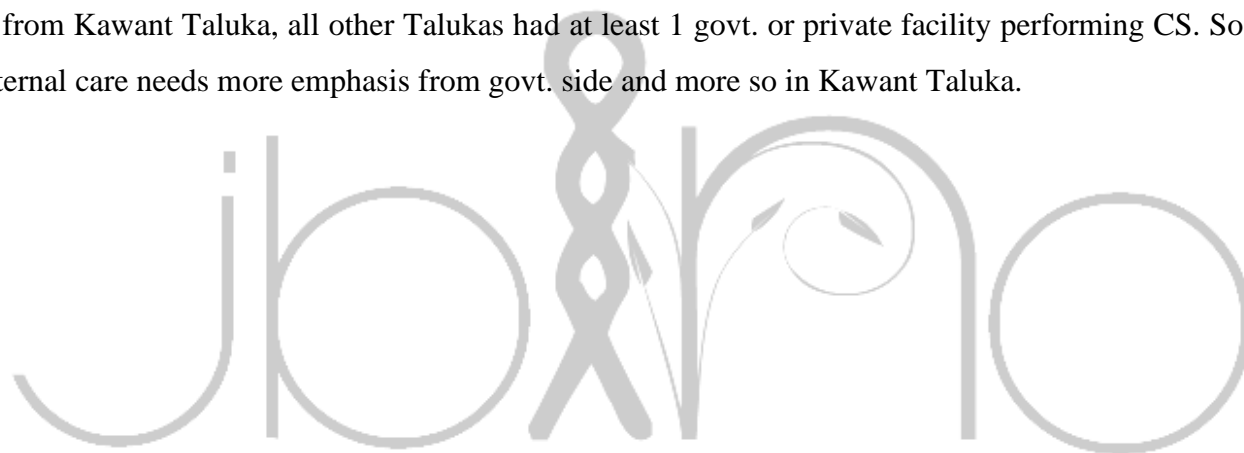


Table 3: Population- wise distribution of Delivery Points (Government & Private) in all Talukas of Vadodara District

NAME OF TALUKA	Population Per Delivery Point[Private + Govt.]	Population Per Delivery Point For Govt.	Population Per Functional Delivery Point	Population Per Private Facility	Population Per PHC	Population Per CHC
CHHOTA UDEPUR	37867	44179	66268	265071	37867	132536
DABHOI	22855	51424	68566	51424	41139	205697
KARJAN	19710	44348	88696	35478	35478	177392
KAWANT	23775	27172	63400	190201	21133	190201
NASWADI	25527	30632	51053	153159	25527	153159
PADARA	34655	69310	92414	92414	39606	277241
PAVIJETPUR	24845	30366	68323	136645	24845	136645
SANKHEDA	25410	45739	76231	57173	32670	114347
SAVALI	42577	63866	85154	127731	36495	127731
SHINOR	26934	26934	80803	-	26934	80803
VADODARA	28550	44864	62810	78512	34894	157024
WAGHODIA	20413	35723	71447	47631	35723	142893
AVERAGE	27276	41354	71221	85465	32049	150821

It is observed from Table.3, that out of 17 CHCs, 13 were Functional Delivery Points. Furthermore, in Sankheda Taluka there was no CHC functioning as FDP. Also marked variations were observed in population-wise availability of FDP CHCs ranging from 1 FDP CHC for a population of 80803 (Shinor Taluka) to 1 FDP CHC for a population 277241 (Padara Taluka). As per IPHS⁽⁵⁾, one CHC is to cover a population of 80,000 in Hilly/ Tribal / Difficult areas and 1, 20,000 in Plain areas. Naswadi, Pavi Jetpur, Kawant, Chhota Udepur Talukas are Hilly/ Tribal / Difficult

areas. Naswadi has 1 CHC for a population of 153159, Pavi Jetpur has 1 CHC for a population of 136645, Kawant has 1 CHC for a population of 190201, Chhota Udepur has 1 CHC for a population of 132536 much below the required number. As regards to population per Government Delivery Point the data shows marked variations ranging from 27172 (Kawant) to 69310 (Padara) with an average of 41354 which is much higher than desired. Whereas population per TotalDelivery Point (private and govt.) is ranging from 19710

(Karjan) to 43577 (Savali) with an average of 27276 which is in excess than desired.

Conclusions: There were only 37% functional delivery points in the government health facilities Two third PHCs provided delivery services, which shows poor utilization of infrastructure and manpower. Not all CHCs provided delivery services and only 4 of them provide LSCS services. When looking into tribal area only one CHC provides LSCS service. 87% LSCS service was provided by private sector. When LSCS was indicated, patient had to be referred to nearby Taluka facilities which required one hour or more for transportation. Most of the CS and deliver services were (32) provided by private facilities with 141 beds and most of them were in non tribal areas. Service Availability Mapping shows that in tribal Talukas especially during monsoon season or where road conditions are poor patient may be required to travel for more than one hour.

Recommendations: Service availability mapping (Computerised SAM and GIS mapping) should be carried out as a rapid assessment tool to generate information on the availability of specific health services, health infrastructure and human resources for each district. with regular updating of data base keeping in view needs and utility of various stakeholders like general population, health care workers, planners, logistic agencies, NGOs etc. This would provide baseline monitoring information for increasing the provision of key services such as RHC. This is also required to fulfil the

principals of primary health care. SAM can be useful for rational and equitable distribution of CHCs in the entire district with the special attention in high focus areas. There is a need of up gradation of existing CHCs keeping in the view of IPHS norms.

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Statements and Declarations; The authors declare that there are no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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