Internship Training

at

State Health Society, National Health Mission, Government of Gujarat

completed

Study on Gap Assessment of USG Machine availability & utilization in Public Health Facilities of Gujarat.

by

Virendra Singh Tanwar

Enroll No. PG/14/065

Under the guidance of

Resp. Dr. N. B. Dholakia

Additional Director (FW)

Gandhinagar

Post Graduate Diploma in Hospital and Health Management

2014-16

International Institute of Health Management Research

New Delhi

The certificate is awarded to

Virendra Singh Tanwar

In recognition of having successfully completed his
Internship in the department of

Family Welfare Department – PC & PNDT Programme

And has successfully completed her Project on

Study on Gap Assessment of USG Machine availability & utilization In Public Health Facilities of Gujarat.

Date: 13 / 05 /2016

at

State Health Society, National Health Mission, Government of Gujarat

He/~~She~~ comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning

We wish him/~~her~~ all the best for future endeavors

Office of the Additional Director (F.W.) H.M.S. & M.E.(H.S.) Gandhinagar
GANDHINAGAR

N.B. Dudakia

Additional Director – FW

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CERTIFICATE FROM DISSERTATION ADVISORY COMMITTEE

This is to certify that **Mr. Virendra Tanwar ,** a graduate student of **Post-Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. She is submitting the dissertation titled **"Study on Gap Assessment of USG Machine availability & utilization in Public Health Facilities of Gujarat, COH National Health Mission ,** at in partial fulfillment of the requirements for the award of the **Post-Graduate Diploma in Health and Hospital Management.**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Mrs.Divya Aggarwal
Assistant professor
IIHMR-New Delhi

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The following dissertation titled **"Study on Gap Assessment of USG Machine availability & utilization in Public Health Facilities of Gujarat."** at **National Health Mission, Gujarat** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name	Signature
Dr Dharmesh Gel	
Prof. Pradeep Panda	P K Panda
Dr Preetha G S	

Certificate from Dissertation Advisory Committee

This is to certify that **Mr. Virendra Singh Tanwar,** a graduate student of the **Post- Graduate Diploma in Health and Hospital Management** has worked under our guidance and supervision. He/ She is submitting this dissertation titled **" Study on Gap Assessment of USG Machine availability & utilization In Public Health Facilities of Gujarat."** at **State Health Society, National Health Mission, Government of Gujarat** in partial fulfillment of the requirements for the award of the **Post Graduate Diploma in Health and Hospital Management.**

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

M.B. Dudakia

Additional Director '- FW

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Name of the Student: Virendra Singh Tanwar

Dissertation Organization: Family Welfare Department , NHM ,Gujarat

Area of Dissertation: Public Health

Attendance: 3 Months

Objectives achieved: Yes

Deliverables: Participation in the activities of the PC&PNDT Programme

Strengths: Energetic, Dynamic, Team player, Analytical Skills

Suggestions for Improvement: He needs to improves his computer skills

Signature of the Officer-in-Charge/ ~~Organisation Mentor (Dissertation)~~

16-5-16

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INTERNATIONAL INSTTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **"Study on Gap Assessment of USG Machine availability & utilization in Public Health Facilities of Gujarat"** and submitted by **Virendra Tanwar,** Enrollment No. **PG/14/065** under the supervision of **Mrs.Divya Aggarwal, Assistant professor , IIHMR-New Delhi** for award of Post-Graduate Diploma in Hospital and Health Management of the Institute carried out during the period from **15th February 2016** to **15th May** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this way or any other Institute or other similar institution of higher learning.

18th/5/16

Signature

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Last but not the least almighty God who gave me courage & strength to perform my duties efficiently. I thank everybody again.

Virendra Singh Tanwar
Students – PGDHM (Batch- 2014-16)
International Institute of Health Management Research (IIHMR), Delhi

Executive Summary

Gujarat has come a long way since implementation of National Health Mission in the State. This is what data on various health indicators suggest. The objective of the study is to get firsthand account of the existing USG Services in First Referral Unit under PC & PNDT program in the State under NHM. The methodology applied was first to get the overall view of USG services availability in PHI and its utilization. Standard quistionner

was used to get various data regarding USG machine availability, functionality & its utilization. Keeping the Goal as to strengthen the PHI Services & for safety of High Risk Mothers.

I also got an opportunity to visit different health facilities at different level working in the district and got to know how they are supporting the State health system in achieving public health objectives. During my study I have done initially Literature review & secondary data review which gave me current picture of USG services in a State Gujarat which was not at par with Government of IPHS guidelines / Government of India / Gujarat guidelines, there was still gap lying in implementation of this program at field level.

Later on as myself with help of district health team decided to take correct surrent scenario picture so that we will be having a Action plan for 2016-17 to strgthen services while filling a gap bu availability of equipments, Human Resources, Training & Public Private Private Partnership to achieve Sustainable Developmental Goals. This initiative may also added in safety of Mother & implementation of USG services at all FRU PHI.

There are many indicators to measure the achievements and progress made in the public health. But the real indicator is the smile on the face of people which erupts as a result of healthy and disease free life.

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ABBREVIATIONS

MDC	–	Mamta Diwas centre
AMDC	--	Aadarsh Mamta Diwas centre
AFP	–	Acute Flaccid Paralysis
ALS	–	Advance life support
AMC	–	Annual Maintenance Contract
ANM	–	Auxiliary Nurse Midwife
APHC	–	Additional Primary Health Centre
ARC	–	Asha Resource Centre
ARI	–	Acute Respiratory Infection
ASHA	–	Accredited Social Health Activist
AWC	–	Aanganwadi Centre
AWW	–	Aanganwadi Worker

AYUSH	–	Ayurved Unani Siddha and Homeopathy
BCC	–	Behaviour Change Communication
BEmONC	–	Basic Emergency Obstetric Neonatal Care
BLS	–	Basic Life Support
BPL	–	Below Poverty Line
BTAST	–	Bihar Technical Assistant Support Team
CBC	–	Community Based Care
CBO	–	Community Based Organization
CBPM	–	Community Based Participation and Monitoring
CD Block	–	Community Development Block
CDPO	–	Child Development Programme Officer
CES	–	Coverage Evaluation Survey
CG	–	Community Group
CH	–	Civil Hospital
CHC	–	Community Health Centre
CMC	–	Comprehensive Maintenance Contract
CMR	–	Child Mortality Rate
CPP	–	Control Program Phase
CS	–	Civil Surgeon
CSMP	–	Contraseptive Social Marketing Programme
CSO	–	Civil Society Organization
CSR	–	Confidential Service Report
DAC	–	District Accridiation Committee
DFID	–	Department for International Development
DH	–	District Hospital
DHAP	-	District Health Action Plan
DHS	–	District Health Society
DMEO	–	District Monitoring & Evaluation Officer
DP	–	Development Partners
DPC	–	District Planning Coordinator
DPHNO	–	District Public Health Nurse Officer
DPMU	–	District Programme Management Unit
DPR	–	Detailed Program Report
DSU	–	District Surveillance Unit

EDL	–	Emergency Drug List
EHSP	–	Essential Health Services Package
EVA	–	Electronic Vacuum Aspiration
FD	–	Feeding Demonstrator
FFHI	–	Family Friendly Hospital Initiative
FLHW	–	Field Level Health Worker
FMR	–	Financial Management Report
FNGO	–	Field Non-Governmental Organization
FPP	–	Family Planning Programme
GOB	–	Government of Bihar
GOI	–	Government of India

Organization Profile:

NATIONAL HEALTH MISSION – GUJARAT

National Health Mission, state health society Gujarat has created wide network of health and medical care facilities in the state to provide primary, secondary and tertiary health care at the door step of every citizen of Gujarat with prime focus on BPL families, marginalized population and weaker sections in rural and urban slum areas.

Department also takes appropriate actions to create adequate educational facilities for medical and paramedical manpower in the state of Gujarat.
NHM in India was launched on 12th April, 2005. It was conceived mainly to provide effective health care to the rural population, especially the disadvantaged groups including women and children, by improving access, enabling community ownership and demand for services, strengthening public health systems for efficient service delivery, enhancing equity and accountability and promoting decentralization. It seeks to provide accessible, affordable and quality health care to the rural population, especially the vulnerable sections. It covers the entire country, with special focus on 18 states where the challenge of strengthening poor public health systems and thereby improve key health indicators is the greatest. These are Uttar Pradesh, Uttaranchal, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Orissa, Rajasthan, Himachal Pradesh, Jammu and Kashmir, Assam, Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Mizoram, Sikkim and Tripura.

NHM is the combination of national programmes, namely, the Reproductive and Child Health II project, (RCH-II) the National Disease Control Programmes and the Integrated Disease Surveillance Project. NRHM also enable the mainstreaming of Ayurvedic, Yoga, Unani, Siddha and Homeopathy Systems of Health (AYUSH).

Health Pyramid of Gujarat

India embarked on its journey to health after independence with a nation-wide network of efficient and effective health services based on what would later be called as the primary health care approach. Services were organized in a bottom up fashion, with a strong rural focus to attend to the needs of the underserved majority.

The primary tier has three types of health care institutions namely:

1. Sub-Centre (SC) for a population of 3000 to 5000,
2. Primary Health Centre (PHC) for 20,000 to 30,000 population
3. Community Health Centre (CHC) for every 1,00,000 population.

The district hospitals function as the secondary tier of care for the rural population. Tertiary health care is provided by highly specialized hospitals and health care institutions that are well equipped with sophisticated diagnostic and investigative facilities.

Department of Health & Family Welfare, Government of Gujarat has created wide network of health and medical care facilities in the state to provides primary, secondary and tertiary health care at the door step of every citizen of Gujarat with prime focus on BPL families, marginalized population and weaker sections in rural and urban slum areas. Department also takes appropriate actions to create adequate educational facilities for medical and paramedical manpower in the state of Gujarat...

To perform all of the activities of Health and Family Welfare Department, discrete sub-departments (HODs) are established as below:

- Commissionerate of Health, Medical Services, Medical Education and Research
- Gujarat Medical Services Corporation Limited.(GMSCL)
- Food and Drug Control Authority (FDCA)
- Directorate of Indian System of Medicine and Homeopathy (AYUSH)
- Employee State Insurance Scheme (ESIS)

Government of Gujarat is committed to provide medical facilities at the most level, keeping pace with rapid technological developments in the field of Healthcare.

Mission

Increasing life expectancy through various health and medical care interventions contributing to overall Improvement in Human Development Index of the Gujarat to a level comparable with developed countries.

Vision

Increase life expectancy and improve physical quality of life of people of Gujarat so that they attain the highest level of physical, mental and spiritual health and contribute towards the development of the state.

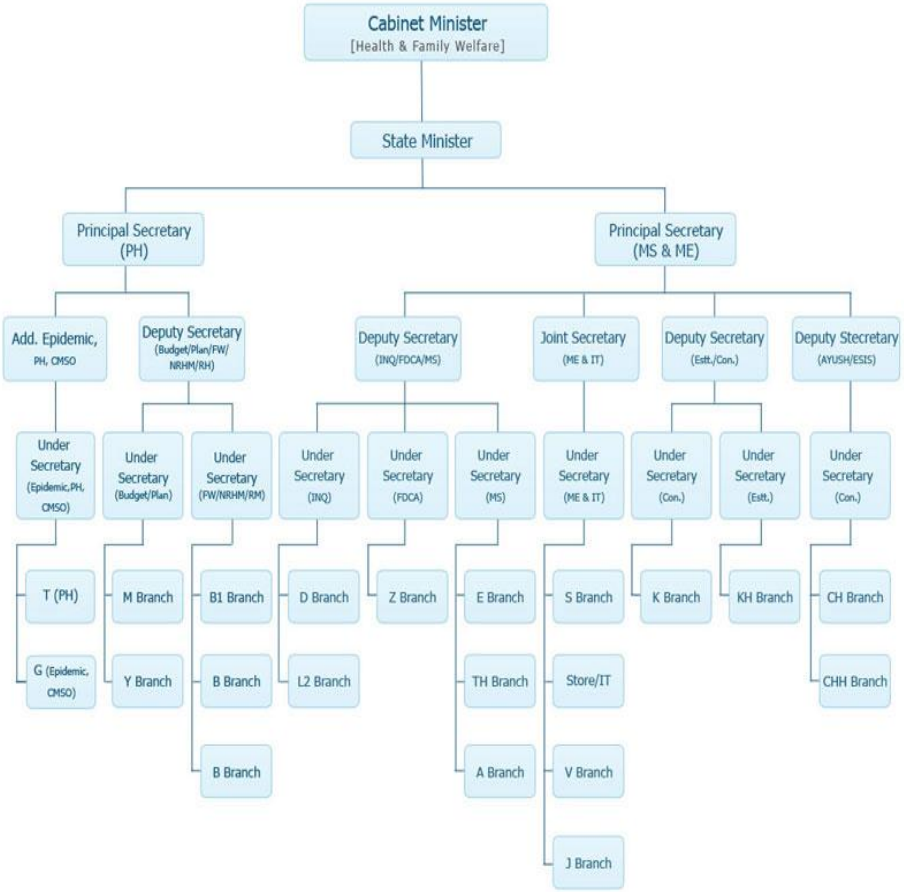
Objective

- Reducing Maternal and Child Mortality.
- Reducing mortality and morbidity due to major communicable and non-communicable diseases.
- Providing emergency medical care during disaster and natural calamities.
- Creating adequate infrastructure for medical and paramedical education.
- Creating awareness on self care, family care and community care.

Functions

- Provision of primary, secondary and tertiary health care to needy population of Gujarat
- Creating adequate infrastructure for provision of health care services
- Creating adequate educational facilities for medical and paramedical manpower
- Food and drug safety through legislation and monitoring system
- Implementation of National Health Programs as per local needs
- Managing emergencies and providing emergency medical care during disaster and natural calamities
- Promoting AYUSH as supplement to modern system of medicine

Organogram:



Family Welfare Department:

Welfare of each citizen is the AIM of family welfare Department. It is tried to achieve mainly through saving the lives of mothers and children and improving their health status as well as checking the population growth.

Different programmes like family planning (later on renamed as family welfare) and programmes like Maternal and Child Health, Universal Immunisation Programme, Diarrheal Control Programme, Acute Respiratory Tract Infection Control Programme, and other nutritional deficiency control programme (later on included incer one programme 'Child Survival & Safe Motherhood') were implemented with same objectives previously. With good coordination and team efforts improvement in quality and coverage of care at various levels are being achieved.

Reproductive and Child Health:

RCH programme was launched in Indian on 15th October 1997 envisages provision of client centred, need based, good quality, integrated RCH services for improving the health of women and children.
Paradigm Shift Under the RCH program all aspects of women's reproductive health across their reproductive cycle, from puberty to menopause are covered. RCH program addresses the needs that have emerged over years of implementing Family Welfare Program. As opposed to the Family Welfare program, the RCH program aims to be more in tune with the ground realities concerning…

Maternal Health:

Department of Health and family welfare, Govt. Of Gujarat is committed to reduce the Maternal Mortality Ratio (MMR). In last 10 years significant reduction has been brought in Maternal Mortality Ratio (MMR) due to several initiatives by Govt. of Gujarat

Child Health:

The Department of Health and Family Welfare of Gujarat is committed to provide affordable, accessible and quality health services to the residents of Gujarat. Although, the department has made significant efforts to reduce the childhood, but slow decrease was seen in the child mortality over the years.

Immunization:

Delivering effective and safe vaccines through an efficient delivery system is one of the most cost effective public health interventions. Immunization programs aim to reduce mortality and morbidity due to Vaccine Preventable Diseases (VPDs).

State nutrition cell (SNC):

State Nutrition Cell (SNC) is the state level unit for Planning, Management and Monitoring of nutrition programmes in the state, namely- MAMTA Abhiyan, National Iron Plus Initiative (NIPI), Gujarat State Nutrition Mission (GSNM), National Programme for Prevention and Control of Fluorosis (NPPCF), National Iodine Deficiency Disorder Control Program (NIDDCP) and Vitamin A supplementation Programme. The cell also consists of additional two units; Iodine Deficiency Disorder (IDD) cell and National Nutrition Monitoring Bureau (NNMB) cell. SNC is a focal point for inter-sectoral convergence of nutrition programmes. The cell is functional under Family Welfare Department and is staffed with Nodal Officer (Programme Officer); Nutrition Officer (Project Officer); Nutrition Consultant; Programme Assistant [(Monitoring and Evaluation) and (Administration)] and Accountant along with other support staff.

Chirnajivi Yojana: State Specific Scheme for Pregnant Womens

The Health & Family Welfare Department has initiated a scheme involving private sector specialists in providing services related to safe delivery, primarily for socio economically weaker sections. The Scheme is called the Chiranjivi Yojana. The scheme was launched on pilot basis in December 2005. In the initial stage, this scheme is made operational in five most under served, tribal, desert and bordering districts i.e. Kutch, Banaskanta, Sabarkanta, Panchamahals and Dahod as a pilot project in the State. The beneficiaries are the mothers from BPL and APL (ST Who do not pay income tax).

Observation & Learning:

A. Drugs & Monitoring Department:

1. Learned about the demand of drugs in the various districts of Gujarat as in the form of indent ,every district pharmist have to send the indent to the state drugs cell to fulfill the needs of the drugs and equipments on sc,chc,mch.

2. As per observations there was a lots of duplications occurs in this process ,so taken a new initiative for specific drugs distribution i.e (specific indent system) directly to the GMSCL instead of state drug cell, as all the procurement of drugs is conducted by GMSCL,as a result duplication of specific drugs reduces and distribution of drugs becomes smooth in all the district of Gujarat.

3.As a project officer of DRUGS & MONITORING have to coordinate with the project officers and consultant of various RMNCH + A programmes ,as they know all the requirement of drugs on ground level according to there respective programmes ,so according to discussion with them I get to know the lacking behind reasons of smooth drugs distribution and this discussion made my monitoring part effective as I get to know about the demands of drugs of the specific programme in the discussion.

4.During this process I also learned about two software (DLIMS) DRUGS &LOGISTIC INFORMATION MANAGEMENT SYSTEM & E-AUSHDI,these two systems are developed for the monitoring purposes and for the indenting purposes.

5.Like to recommend refresher training should be given to district pharmacist on these softwares ,so the command of the pharmacist on these softwares can increase because at last the ground level persons i.e district pharmacist have to send the requirement of there respective districts by using these two software ,so proper training support is required for a smooth drugs and logistic management system.

B. PC&PNDT Department: (I/c PO PC & PNDT)

1. learned about the various norms about the PC&PNDT Act.

2.Monthly and quarterly reports from all registered USG services including form “F” from CHC,SDH,MCH and Private facilities are mendatory have to send at state level (PC&PNDT)cell by DPA(PC&PNDT) and have to maintained by the projecr officer for the purposes of monitoring and analysis.

3.A schedule of visit to the districts appropriate authority and registered USG facilities is prepared by the projecject officer for regular monitoring.

4.For strengthing the PC&PNDT programme various activities like workshops for cross-border violation meetings and training of all the district level committee including data operators and district programme assistant is regularly conducted at state level.

5. I also got responsibility of Registration of USG manufacturers with all mandatory documentations of criteria of PC&PNDT Act for providing them the licence for distributions of USG machines in the Gujarat state. The manufacturers also have to send the details of selling USG machines and have to maintain all the reports which have to send at state PC&PNDT Cell for monitoring purposes according to the ACT.

7. Also learnt about the convictions and all cases against the breach of the Act.

Dessertation

on

An Gap Assessment of USG Machine availability & utilization in Public Health Facilities of Gujarat

Title of Research Project:

A Gap Assessment of USG Machine availability & utilization in Public Health Facilities of Gujarat (FRU - CHC, GIA, SDH, DH, MCH).

Introduction & Background:

Gujarat is a state in Western India, also referred as the Jewel of Western India. It has an area of 196,024 km2 (75,685 sq mi) with a coastline of 1,600 km (990 mi), most of which lies on the Kathiawar peninsula, and a population in excess of 60 million. The state is bordered by Rajasthan to the north, Maharashtra to the south, Madhya Pradesh to the east, and the Arabian Sea and the Pakistani province of Sindh to the west. Its capital city is Gandhinagar, while its largest city is Ahmedabad. Gujarat is home to the Gujarati-speaking people of India.

The state encompasses some sites of the ancient Indus Valley Civilization, such as Lothal and Dholavira. Lothal is believed to be one of the world's first seaports. Gujarat's coastal cities, chiefly Bharuch and Khambhat, served as ports and trading centres in the Maurya and Gupta empires, and during the succession of royal Saka dynasties from the Western Satraps era, whose geographic territories included Saurashtra and Malwa: modern Gujarat, South Sindh, Rajasthan, Maharashtra and Madhya Pradesh states.

On May 1, 1960, Gujarat was created out of 17 northern districts of the former state of Bombay. Located on the western coast of India, has the longest coastline of 1,600 Km. Bounded by the Arabian Sea to the west and south west and by Pakistan in the North Population of approximately 6.03 Crore (4.99% of Indian Population). It has States of Rajasthan and Madhya Pradesh towards the north east and east, Maharashtra and the Union Territories of Daman, Diu and Nagar Haveli, towards the south. Gandhinagar, the capital city of Gujarat is located close to Amdavad (Ahmedabad), the commercial capital Ahmedabad is the most populated District in the State, with 7.20 million people. Diverse climatic conditions with mild and pleasant winters and hot and dry summers and heavy monsoon. The state currently has 33 districts

Table No: 1: Demographic Details of Gujarat State

Description	**2011**		**Description**	**2011**
Female	**28,901,346**		**Estimated Population**	6.03 Crore
Sex Ratio	**918**		**Actual Population**	60,383,628
% of total Populat.	**4.99%**		**Population Growth**	19.17%
Literacy	**79.31**		**Area km2**	196,024

Male Literacy	**87.23**		**Area mi2**	75,685
Female Literacy	**70.73**		**Density/km2**	308
Total Literate	**41,948,677**		**Density/mi2**	798
Male Literate	**23,995,500**		**Male**	31,482,282
Female Literate	**17,953,177**			

Picture No: 1: Map of Gujarat Districts

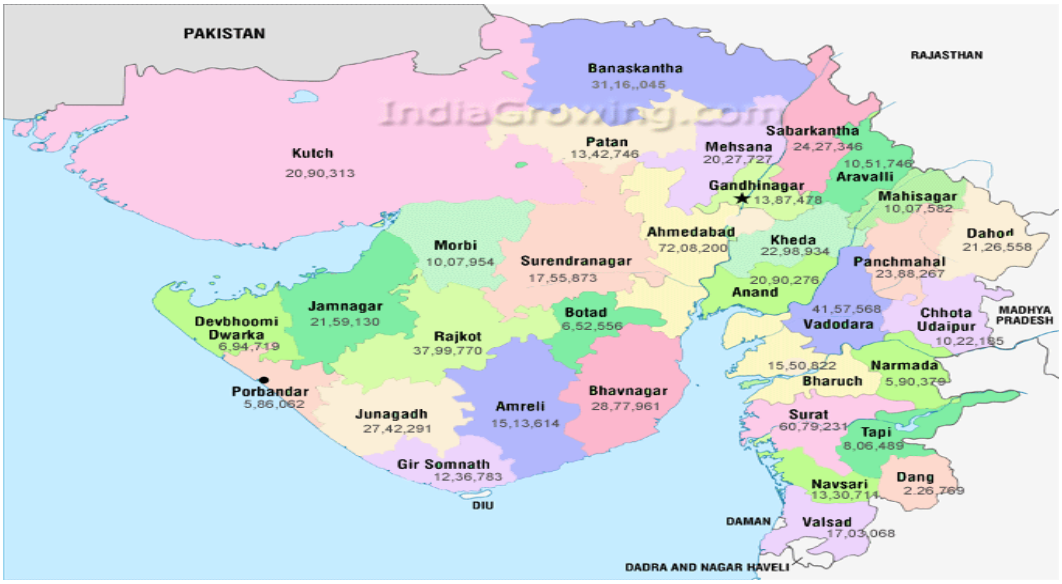
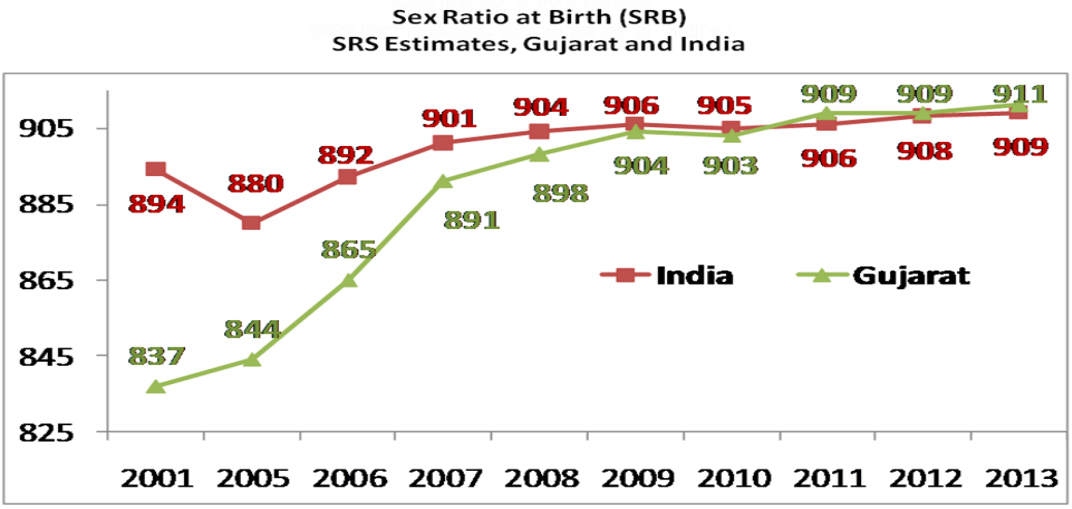


Table No:2:Gujrat Demographic & Health Facility Profile

Gujarat Dmographic & Health Facility Profile								
Sr. No.	**District**	**Total Population** (Census 2011)	**Yr work-load for ANC**(Source MCTS, 2015-16)	**SC**	**PHC**	**CHC**	**SDH**	**DH**
1	**2**	**3**	**6**	**7**	**8**	**9**	**10**	**11**
GUJARAT		60383628	1451600	8953	1297	322	33	22
1	AHMEDABAD	7208200	43000	214	38	10	1	0
2	AMRELI	1513614	37000	245	41	12	3	1
3	ANAND	2090276	45000	274	50	11	0	1
4	ARVALLI	1020671	28500	215	35	10	1	0
5	BANASKANTHA	3116045	85000	745	98	20	3	1
6	BHARUCH	1550822	37000	237	38	9	0	1
7	BHAVNAGAR	2877961	42000	300	44	13	2	0
8	BOTAD	645196	20500	75	15	5	0	1
9	CHHOTAUDEPUR	1071831	27000	310	45	10	0	1
10	DAHOD	2126558	73000	637	78	13	1	1
11	DEVBHUMI DWARKA	752484	17500	166	17	4	1	1

12	GANDHINAGAR	1387478	32000	168	26	9	1	0
13	GIR SOMNATH	1210749	30000	172	25	8	0	1
14	JAMNAGAR	2159130	21000	207	31	7	0	0
15	JUNAGADH	2742291	22000	237	38	10	0	0
16	KACHCHH	2090313	57000	435	48	15	2	0
17	KHEDA	2298934	55000	311	47	11	1	1
18	MAHESANA	2027727	45000	288	56	14	2	1
19	MAHISAGAR	994624	26500	224	33	5	1	1
20	MORBI	965278	22000	195	26	6	1	1
21	NARMADA	590379	13000	174	25	3	1	1
22	NAVSARI	1330711	23000	296	44	10	2	1
23	PANCHMAHALS	1642268	44000	299	48	11	0	1
24	PATAN	1342746	33000	210	38	15	1	0
25	PORBANDAR	584704	14000	84	11	4	0	1
26	RAJKOT	3799770	36000	339	36	12	4	1
27	SABARKANTHA	2427346	36000	276	44	12	1	0
28	SURAT	6079231	32000	358	54	13	1	0
29	SURENDRANAGAR	1755873	36000	348	38	11	2	1
30	TAPI	806489	14000	241	35	5	0	1
31	THE DANGS	226769	7500	68	9	3	0	1
32	VADODARA	819004	32000	242	41	10	0	1
33	VALSAD	1703068	34000	363	45	11	1	0

Graph No:1:Sex at Birth



Literature Review:

In India, sex ratio becomes a most important issue in recent Indian demography because of its worst condition. Deficit for the girls in the second and third order child was more evident among women who were either educated beyond primary school level or from upper income group and not engaged in any economic activities. There was various study have done on demographic scenario of female number and comparison of sex ratio with previous & future trend.

One of the study included the data of Indian census 1901 to 2001 and provisional data of census 2011. Study had focused mainly on data of Gujarat and India. Study had systemically searched the data and relevant information from internet and index journals.

Results of study shows that Sex ratio is highest decreased in Kuchchh district (35), Amreli (23), Surat (23). Sex ratio increased in 18 districts of Gujarat in 2011 census. , in India there is improvement in sex ratio after implementation of PNDT act 1971 but in Gujarat there is still decrease in the sex ratio.

This study summarizes that use of the new technology and advances are wide spread in all social sector but it is more in the well-educated and well off society. Study results shows that if there is no change in current situation or more actions are not taken, sex ratio will continuously decrease. Parents in a society should change their attitude towards certain norms that lead them to give better care to their sons than their daughters, and excess female mortality may be an unintended consequence.

(A Report on Situation Analysis of Sex Ratio in Gujarat and India by Gaurav J. Desai published in International Journal of Health Sciences and Research (IJHSR) available at http://www.scopemed.org)

A Study on Research and review to strengthen Pre-Conception and Pre-Natal Diagnostic Techniques (prohibition of sex selection) act's implementation across key states (PCPNDT ACT.
The goal of the project was to assess implementation of the Pre-Conception and Pre-Natal Diagnostic Techniques (PC&PNDT) Act, 1994 by reviewing cases that have been filed by the state under it. The geographic areas of focus for this study were the following 18 high burden states and union territories of India, where sex ratios are a major cause for alarm and anxiety, and where interventions are required on priority: Andhra Pradesh, Assam, Goa, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, West Bengal, Delhi, Uttarakhand, Uttar Pradesh, Orissa, Bihar and Jharkhand.

(A Study done by Principal Investigator: Subhadra Menon during 2008-2009, by PHFI, available at www.phfi.org)

As we can say that as literacy rate increases, the sex-ratio decreases. The reason behind it may be the trend of putting a full stop on another child after the birth of a boy and only going for a second child only if the first born is a girl child. Also we can notice the number of families having a single child is increasing in this class of people. The correlation between Sex-ratio and SC&ST population is also -0.90. It means that population of this class increases then the Sex-ratio decreases. This can be because of they have adopted the same practice of going for a second child only if the first born is a girl, otherwise they are happy with a small family if the first child is a boy. Also, it can be the result of female feticide in the said population. Monitoring sex ratio at birth from the CIVIL REGISTRATION DATA, which gives monthly report for any administrative level. Instructions have been already issued in this regard by the Registrar General India, to all the CHIEF REGISTRARS OF BIRTHS AND DEATHS in the state for monitoring the monthly sex ratio at birth and disseminate this data back to the public and governments for timely intervention to take necessary action to keep balance in sex ratio in India.

(Research Paper on ANALYSIS OF DECLINING SEX- RATIO IN GUJARAT by Rakesh R. Pandya (Directorate of Economics and Statistics, Gandhinagar) and R.G.Bhatt (Department of Statistics, Gujarat University, Ahmedabad) published at Indian Journal of Research on Jan, 2015)

Table No :3: Tribal Scenario :- Trend in Sex Ratio(0-6 yrs), 1991-2011, Tribal Districts of Gujarat

Sl. No.	State/District	Sex Ratio(0-6 yrs), 2001-2011, Tribal District				
		Year			Increase/Decrease (+/-)	
		1991	2001	2011	Between 1991 & 2001	Between 2001 & 2011
1	2	3	4	5	6	7
1	**Surat**	944	859	835	-85	**-24**
2	**Dohad**	1001	967	948	-34	**-19**
3	**The Dangs**	999	974	964	-25	**-10**
4	**Banas Kantha**	934	907	898	-27	**-9**
5	**Valsad**	976	933	925	-43	**-8**
6	**Narmada**	985	945	941	-40	**-4**
7	**Panch Mahals**	970	935	932	-35	**-3**
8	**Tapi**		951	953		2
9	**Bharuch**	955	918	920	-37	2
10	**Navsari**	955	915	923	-40	8
11	**Vadodara**	934	886	897	-48	11
12	**Sabar Kantha**	933	879	903	-54	24
	Gujarat	**928**	**883**	**890**	**-45**	**7**
Source- Census Report, India						

Table No : 4 : Current scenario:- Sex Ratio (0-6 yrs) 1991 to 2011

Current scenario:- Sex Ratio (0-6 yrs) 1991 to 2011 in decreasing order of last decadal change [Source : Census]						
No.	District	Child Sex- ratio (0-6) (Number of Females per 1000 Males)				
		1991	2001	2011	(+) or (-) (2001-1991)	(+) or (-) (2011-2001)
1	2	3	4	5	6	7
1	**Surat**	**944**	**859**	**835**	**-85**	**-24**
2	**Dohad**	**1001**	**967**	**948**	**-34**	**-19**
3	**The Dangs**	**999**	**974**	**964**	**-25**	**-10**
4	**Banas Kantha**	**934**	**907**	**898**	**-27**	**-9**
5	**Valsad**	**976**	**933**	**925**	**-43**	**-8**
6	**Amreli**	**923**	**892**	**886**	**-31**	**-6**
7	**Narmada**	**985**	**945**	**941**	**-40**	**-4**

8	**Panch Mahals**	**970**	**935**	**932**	**-35**	**-3**
9	**Kachchh**	**929**	**922**	**921**	**-7**	**-1**
10	**Tapi**	**990**	**951**	**953**	**-39**	**2**
11	**Bharuch**	**955**	**918**	**920**	**-37**	**2**
12	**Junagadh**	**934**	**903**	**907**	**-31**	**4**
13	**Porbandar**	**909**	**898**	**903**	**-11**	**5**
14	**Jamnagar**	**916**	**898**	**904**	**-18**	**6**
15	**Navsari**	**955**	**915**	**923**	**-40**	**8**
16	**Rajkot**	**916**	**854**	**862**	**-62**	**8**
17	**Bhavnagar**	**925**	**881**	**891**	**-44**	**10**
18	**Surendranagar**	**905**	**886**	**896**	**-19**	**10**
19	**Vadodara**	**934**	**886**	**897**	**-48**	**11**
20	**Kheda**	**900**	**876**	**896**	**-24**	**20**
21	**Ahmadabad**	**896**	**835**	**857**	**-61**	**22**
22	**Sabar Kantha**	**933**	**879**	**903**	**-54**	**24**
23	**Patan**	**903**	**865**	**890**	**-38**	**25**
24	**Gandhinagar**	**888**	**816**	**847**	**-72**	**31**
25	**Anand**	**896**	**849**	**884**	**-47**	**35**
26	**Mahesana**	**899**	**801**	**842**	**-98**	**41**
Gujarat		**928**	**883**	**890**	**-45**	**7**

Problem statement:

Government of India & Government of Gujarat already taken various initiatives to strengthen free services to Pregnant Womens through various initiatives such as JSSK Program, Cheeranjivi Yojana, Kasturba Poshan Sahay Yojana etc. Recently a new initiatives from Government of India also launched as " Pradhan Mantri Surakshit Matritva Adbhiyan" focusing on services delivery during 2nd & 3rd ANC. So to ensure USG services to each pregnant women in all Public Health Facilities to identify High Risk Womens on time & Timely Medical Mangment of each High Risk Women. So a gap assessment required to achive same objective & as well as required for planning a PC PNDT program State Action Plan for 2016-17 in Gujarat State.

Rational:

- To understand the availability & utilization of USG machine in Public Health Facilities.
- To improve the Health Service coverage to all pregnant womens of Gujarat.

Scope of Study:

This Assesment will be able to provide current scenario of availability & utililizaion of USG Machines in Public health facilities. Also this will be utilized for strengthening services to hgh risk pregnant womens services in prompt diagnosis and well medical management.

Research Question:

1. How many USG machines are available & utilized in Public Health Facilities.

2. What are the training gap to strengthen USG services in the Public Health Facilities.

Objective:

To Identify the critical gaps in USG services in Public Health Facilities for pregnant womens.

Methodology:

- **Type of Study : Cross-sectional prospective study**

- **Study Area: Public Health Facilities of Gujarat (CHC & above)**

Table No:5: Details of study area

Area Name	Participant / stake holders
FRU - CHC, GIA, SDH, DH, MCH of Gujarat State	CHC Supritendent SDH Supritendent DH Supritendent MCH Supritendent

- **Study design:** Exploratory non experimental design.

- **Sample Size:** FRU CHC (23), SDH(33), GIA (8), DH(22), MCH(17)

- **Sampling technique :** Purpusive sampling (Covering all Government USG facilities)

- **Study Subjects:**

Table No:6: Details of subject

S.N.	Place	Types of respondents
1	Registered USG Public health facilities (FRU)	CHC Supritendent, GIA Supritendent, SDH Supritendent, DH Supritendent, MCH Supritendent

- **Data Collection Method:**

Primary & Secondary Data Review : Data Collected from all 319 CHC, 33 SDH, 22DH, 17 MCH

- **Tool & Technique:**

Table No:7: Tools & Techniques

Tool	Technique
Semi structured Questionner	Quantitative study

- **Validity:** Phase validity

Table No:8:Details of validity

Tool	Validity Tech. – Phase validity
Questionnaire	Phase Validity by Dr. N B Dholakia (AD – FW) & Dr. Divya Agarwal (Assoc. Professor, IIHMR, Delhi)
Reference By	GOG Standardized checklist, GOI Standardized checklist

- **Research Project Team:**

Recruitment of field staff (investigators): not hired from outside, field staff as Myself & PC & PNDT Operators.

Team composition:

a) Team Leader: Project Officer - PC & PNDT

b) Team Members: PC & PNDT - District Program Assistant

Research Team roles & responsibility:

Table No:9: Research Team roles & responsibility:

State & District Level	Expertise	Dr. N. B. Dholakia, AD (FW) Dr. R R Vaidh, Asst Director (FP) Dr. P L Dave, Program officer (PCPNDT)
	Research Guidance	Dr. Keshav Sharma, Project Officer- MH
	Team Leader	Virendra Singh Tanwar
	Team Investigator	Virendra Singh Tanwar, District PC & PNDT Program Assistant

Financial & logistic Planning:

- Budget is managed from PC & PNDT Program budget.

- Mobility Support from State PC & PNDT Mobility.

Orientation of team regarding research project:

- Trainer: Virendra Singh Tanwar (PO – PC & PNDT)
- Training Venue: Training Hall at Circuit House, Gandhinagar
- Stationary: Projector, Marker, whiteboard etc
- Tools: Printed Questionnaire
- Duration: ½ day & on field guidance
- Content of the Training course: PC & PNDT Programme, USG Machines details & its types.
- Techniques of Training: Classroom model.

Data Management and Analysis plan:

Table No:10: **Data Management Plan**

Editing:	Field editing is done by respective Program Assistant.
Entry:	Entry is done by me at office first in Excel.
Cleaning:	Cross validation is done with data and checked.

Ethical & Gender Consideration:

- Clearance from the Ethical Committee(PC&PNDT).
- Informed permmission from appropriate authority, Confidentiality, Privacy, Only for research purpose.
- Minimizing risk & maximizing potential benefits. .

Limitation of Study:

As Time limitation so Survey team is used so there was a possibility of reporting some false information. However, every effort was made to motivate respondents to provide true information and same time field cross check was adopted randomly with help of all RDD & Regional Programme Coordinator.

Also made ensured by State Programme Officer in meeting that no punishable action will be taken against this survey or Research findings by team.

Results & Discussion:

As all data from all 103 FRU was compiled as per Questionner Indicator to analyze the performance, the findings of the studies mentioned below:

Medical College Hospitals:

Table No:11:Analysis of medical colleges

Sr. No	District	Name of Facility (MCH ALL)	Average delivery /month	Obstetrician or CEmOC	Anaesthetist or LSAS	Paediatrician or EmNBC	Sonography Machine Available (Yes/No)	Operational (Yes/No)	SoNography Done (Yes/No)
a	c	d	i	k	l	m	t	u	v
1	Ahmedabad	General Hospital, Sola	262	Obst	Anest	Ped	Yes	Yes	Yes
2	Ahmedabad	Civil Hopsital Ahmedabad	355	Obst	Anest	Ped	Yes	Yes	Yes
3	Ahmedabad	L G Hospital	540	Obst	Anest	Ped	Yes	Yes	Yes
4	Ahmedabad	V S Hospital	680	Obst	Anest	Ped	Yes	Yes	Yes
5	Ahmedabad	Shardaben Hospital	414	Obst	Anest	Ped	Yes	Yes	Yes
6	Bhavnagar	Sir T General Hospital	333	Obst	Anest	Ped	Yes	Yes	Yes
7	Junagadh	General Hospital, Junagadh	578	Obst	Anest	On Call	Yes	Yes	Yes
8	Gandhinagar	General Hospital, Gandhinagar	441	Obst	Anest	Ped	Yes	Yes	Yes
9	Patan	Medical College Hospital Dharpur	74	Obst	Anest	Ped	Yes	Yes	Yes
10	Sabarkantha	General Hospitall, Himatnagar	63	Obst	Anest	Ped	Yes	Yes	Yes
11	Jamnagar	G. G. Hospital Jamnagar	712	Obst	Anest	Ped	Yes	Yes	Yes
12	Rajkot	PDU Hospital	656	Obst	Anest	Ped	Yes	Yes	Yes
13	Surat	Smimer Medical college Surat	609	Obst	Anest	Ped	Yes	Yes	Yes
14	Surat	Civil Hospital, Surat	696	Obst	Anest	Ped	Yes	Yes	Yes
15	Valsad	General Hospital, Valsad	102	Obst	Anest	Ped	Yes	Yes	Yes
16	Vadodara	SSG Hospital, Vadodara	732	Obst	Anest	Ped	Yes	Yes	Yes
17	Vadodara	General Hospital, Gotri	115	Obst	Anest	Ped	Yes	Yes	Yes

As per above table explains that all 17 Medical College in Gujarat have Obestrician available, sonography machine available with every one and all hospital also provide USG services to beneficiary.

District Hospitals:

All 22 District Hospitals have sonography machines available with them in Gujarat State

Table No:12:Analysis of district hospital

Sr. No	District	Name of Facility DH ALL	Type of facility	Average delivery /month	Obstetrician or CEmOC	Anaesthetist or LSAS	Paediatrician or EmNBC	Sonography Machine Available (Yes/No)	Operational (Yes/No)	SoNography Done (Yes/No)
a	c	d	e	i	k	l	m	t	u	v
1	Kheda	General Hospital Nadiad	DH	56	CM Setu	Anest	Ped	Yes	No	No
2	Surendranagar	M.G. General Hospital	DH	18	Obst	On Call	CM Setu	Yes	No	No
3	Botad	Botad	DH	152	CEmOC	On Call	No	Yes	No	No
4	Gir Somnath	Veraval	DH	80	Obst	On Call	Ped	Yes	No	No
5	Bharuch	General Hospital Bahruch	DH	143	Obst	Anest	No	Yes	No	No
6	Mahisagar	Government Hospital Lunawada	DH	16	No	No	No	Yes	No	No
7	Narmada	General Hospital Rajpipla	DH	50	Obst	Anest	Ped GSEDS	Yes	No	No
8	Panchmahal	General Hospital Godhra	DH	49	Obst	Anest	Ped	Yes	No	No
9	Vadodara	Jamnabai General Hospital	DH	247	Obst	Anest	Ped	Yes	No	No

There are following 9 District Hospitals as per Table No: having Sonography Machines available with them but its not operational. Out of 9 health Facilities eight of them have Obstetrician, CEMOC Doctors which can be trained for Sonography services to provide services at hospital.

Table No:13:Aalysis of district hospital -II

Sr. No	District	Name of Facility	Type of facility	Average delivery /month	Obstetrician or CEmOC	Anaesthetist or LSAS	Paediatrician or EmNBC	Sonography Machine Available (Yes/No)	Operational (Yes/No)	SoNography Done (Yes/No)
a	c	d	e	i	k	l	m	t	u	v
1	Anand	S.S.Hospital Petlad	DH	86	Obst	Anest	CM Setu	Yes	Yes	No
2	Amreli	General Hospital Amreli	DH	170	Obst	Anest	CM Setu	Yes	Yes	Yes
3	Banaskantha	General Hospital Palanpur	DH	51	Obst	LSAS	Ped	Yes	Yes	Yes
4	Mehsana	General Hospital Mehsana	DH	101	Obst	Anest	Ped	Yes	Yes	Yes
5	Devbhumi Dwarka	Jam Khambhalia	DH	73	Obst	LSAS	No	Yes	Yes	No
6	Morbi	Morbi	DH	77	No	LSAS	Ped	Yes	Yes	Yes
7	Porbandar	Bhavsinhji General Hospital	DH	261	CM Setu	Anest	Ped	Yes	Yes	Yes
8	Rajkot	PK General Hospital	DH	171	Obst	Anest	Ped	Yes	Yes	Yes
9	Dang	General Hospital Dang	DH	59	Obst GSEDS	LSAS	Ped	Yes	Yes	Yes
10	Navsari	M.G.G.Hospital Navsari	DH	106	Obst	Anest	Ped	Yes	Yes	No
11	Tapi	General Hospital Vyara	DH	202	Obst	Anest	Ped	Yes	Yes	Yes
12	Chhota Udepur	Chhotaudepur	DH	103	CEmOC/ Obst	LSAS	EmNBC	Yes	Yes	Yes
13	Dahod	General Hospital Dahod	DH	444	Obst	Anest / LSAS	Ped	Yes	Yes	Yes

There are 13 District Hospitals as per Table No:13 having Sonography Machines available with them and operational also. But in SS Hospital Petlad (Anand), Jam Khambaliya (Dev Bhumi Dwarka), MGG Hospital (Navsari) after having machine also sonography services is not happening. So all above three district hospitals also have obstetrician placed so obstetricians can be trained for Sonography services to provide services at hospital.

Grant in Aid / Trust District Hospital:

Table No:14:Analysis of Grant in Aid / Trust District Hospital

Sr. No	District	Name of Facility (GIA / TDH ALL)	Type of facility	Average delivery /month	Obstetrician or CEmOC	Anaesthetist or LSAS	Sonography Machine Available (Yes/No)	Operational (Yes/No)	SoNography Done (Yes/No)
1	Junagadh	R.N.Vala Trust Hospital,Kodinar	GIA	63	Obst	On Call	Yes	Yes	Yes
2	Banaskantha	Gandhi-Lincoln Hospital, Deesa	GIA	14	Obst	On Call	Yes	Yes	Yes
3	Gandhinagar	Ashirvad Hospital Dahegam	GIA	96	Obst	On Call	Yes	Yes	Yes
4	Mehsana	Sarvajanik Hospital	GIA	10	Obst	Anest	Yes	Yes	Yes
5	Arvalli	Rasiklal Shah Sarvjanik Hospital, Modasa	GIA	51	Obst	Anest	Yes	Yes	Yes
6	Kutch	Adani Insti Medical Science Bhuj	Trust DH	211	Obst	Anest	Yes	Yes	Yes
7	Navsari	Gram Seva Trust Kharel	GIA	138	Obst	Anest	Yes	Yes	Yes
8	Surat	Sanjivani Hospital, Chalathan	GIA	42	Obst	Anest	Yes	Yes	Yes
9	Surat	Sardar Smarak Hospital, Bardoli	GIA	172	Obst	Anest	Yes	Yes	Yes
10	Tapi	Janak Smarak Trust Hospital, Vyara	GIA	7	Obst	Anest	Yes	Yes	Yes
11	Valsad	Shrimad Rajchandra Hospital, Dharampur	GIA	73	Obst	Anest	Yes	Yes	Yes
12	Bharuch	Sewa Rural Hospital, Jhagadiya	GIA	406	Obst	Anest	Yes	Yes	Yes

All Grant in Aid (GIA) & Trust District Hospitals have sonography machines with them and all are operational.

Sub District Hospital :

Table No:15:Analysis of Sub District Hospital

Sr. No	District	Name of Facility (SDH ALL)	Type of facility	Average delivery /month	Obstetrician or CEmOC	Anaesthetist or LSAS	Sonography Machine Available (Yes/No)	Operational (Yes/No)	SoNography Done (Yes/No)
1	Ahmedabad	Rukshamaniben Hospital	SDH	123	Obst	Anest, LSAS	Yes	But Not working properly	Yes
2	Kheda	General Hospital Kheda	SDH	44	CM Setu	LSAS	Yes	No	No
3	Surendranagar	Government Hospital - Dhangandhara	SDH	76	No	No	Yes	No	No
4	Surendranagar	Government Hospital - Limbdi	SDH	42	Obst	Anest	Yes (condamnation)	No	No
5	Amreli	Government Hospital Rajula	SDH	66	Obst	No	Yes	Yes	Yes
6	Amreli	Government Hospital Savarkundla	SDH	111	No	LSAS	Yes	Yes	Yes
7	Bhavnagar	Mansinhji Hospital Palitana	SDH	123	CPS	No	Yes	No	No
8	Bhavnagar	Mahuva mgh	SDH	87	Obst	CM Setu	Yes	Yes	No
9	Arvalli (Modasa)	Bhiloda	SDH	11	Obst	Anest	Yes	Yes	Yes(licence expire feb-16
10	Banaskantha	General Hospital Deesa	SDH	37	CM Setu	LSAS	Yes	Yes	No(Dr. Not reg. online)
11	Banaskantha	Tharad	SDH	134	Obst	No	Yes	Yes	Yes
12	Gandhinagar	Mansa	SDH	46	Obst	Anest	Yes	Yes	Yes
13	Patan	Sidhpur	SDH	38	Obst	Anest	Yes	Yes	Yes
14	Sabarkantha	Khedbrahma	SDH	161	Obst	On Call	Yes	Yes	Yes
15	Devbhumi Dwarka	Dwarka	SDH	61	CEmOC	Anest	Yes	No	No
16	Kutch	General hospital Gandhidham	SDH	66	Obst	No	Yes	No	No
17	Kutch	Government Hospital Mandvi	SDH	114	Obst	Anest	Yes	Yes	No
18	Rajkot	Dhoraji	SDH	52	CM Setu	Anest	Yes	Yes	Yes
19	Rajkot	Gondal	SDH	59	CEmOC	LSAS	Yes	Yes	No
20	Rajkot	Upleta	SDH	32	Obst	Anest	Yes	No	No
21	Navsari	Cottage Hospital Vansda	SDH	123	Obst	Anest	Yes	Yes	Yes
22	Valsad	State Hospital Dharampur	SDH	192	No	Anest	Yes	Yes	Yes
23	Dahod	Devgadbaria	SDH	168	CEmOC	Anest	Yes	Yes	Yes
24	Mahisagar	Government Hospital Santrampur	SDH	40	Cemoc	LSAS	Yes	No	No

Out of total 28 SDH in 24 SDH Sonography Machines are available, in out of 24 SDH in eight SDH (General Hospital Kheda, Government Hospital Dhanganhera, Government Hospital Limbdi, Mansingh Ji Hospital Palithana, SDH Dwarka, General Hospital Gandhidham, SDh Upleta Rajkot, Government Hospital Satrampur) machines are available but sonography services are not operational. In Rukmaniben Hospital Ahmedabad is available not working

properly, In Bhiloda SDH license need to be renewed so services not started, in General Hospital Deesa Reistration is pending.

Table No:16: Analysis of Sub District Hospital-II

Sr. No	District	Name of Facility (SDH ALL)	Type of facility	Average delivery /month	Obstetrician or CEmOC	Anaesthetist or LSAS	Sonography Machine Availablle (Yes/No)	Operational (Yes/No)	SoNography Done (Yes/No)
5	Amreli	Government Hospital Lathi	SDH	54	No	No	No	No	No
14	Mehsana	General Hospital Visnagar	SDH	18	Obst	Anest	No	No	Yes
22	Rajkot	Jetpur	SDH	61	CEmOC	NO	No	No	No
27	Narmada	Dediyapada	SDH	134	No	No	No	No	No

There are four SDH (Government Hospital lathi, General Hospital Visanagar, SDH Jetpur, SDH Dediyapada Narmada) do not have sonography machines with them.

Community Health Centres (FRU):

Table No:17:Analysis of Community Health Centres (FRU)

Sr. No	District	Name of Facility (SDH ALL)	Type of facility	Average delivery /month	Obstetrician or CEmOC	Anaesthetist or LSAS	Sonography Machine Available (Yes/No)	Operational (Yes/No)	SoNography Done (Yes/No)
1	Ahmedabad	Viramgam	CHC	51	Obst	On Call	Yes	Yes	Yes
2	Ahmedabad	Bagodra	CHC	4	No	No	No	No	No
3	Ahmedabad	Dhandhuka	CHC	41	CM Setu	No	Yes (condamnation)	No	No
4	Anand	Tarapur	CHC	306	CEmOC	LSAS	No	No	No
5	Surendranagar	Chotila	CHC	91	CEmOC	On Call	No	No	No
6	Surendranagar	Sayla	CHC	71	No	No	Yes	No	No
7	Gir Somnath	Una	CHC	19	CEmOC	No	Yes	No	No
8	Junagadh	Mangrol	CHC	71	CEmOC	LSAS	Yes	No	No
9	Banaskantha	Shihori	CHC	183	CEmOC	Anest	No	No	No
10	Patan	Radhanpur	CHC	38	Obst	Anest	Yes	Yes	Yes
11	Arvalli	Shamlaji	CHC	48	Obst	On Call	Yes	Yes	Yes
12	Banaskantha	Cottage Hospital Ambaji GAI	CHC	71	No	No	Yes	No	No
13	Mehsana	Vadnagar	CHC	4	No	Anest	Yes	No	No
14	Jamnagar	Kalavad	CHC	81	No	NO	No	No	No
15	Kutch	Nakhatrana	CHC	53	CEmOC	No	Yes	No	No
16	Kutch	Rapar	CHC	66	No	NO	No	No	No
17	Kutch	Khavada	CHC	106	CEmOC	LSAS	No	No	No
18	Dang	Waghai	CHC	31	Deputation	No	No	No	No
19	Valsad	Kaprada	CHC	68	CPS	No	No	No	No
20	Chhota Udepur	Jambugam	CHC	243	Obst	On Call	Yes	Yes	Yes
21	Dahod	JHALOD	CHC	226	Deputation	Anest	No	No	No
22	Panchmahal	Halol	CHC	36	CPS	No	Yes	No	No
23	Vadodara	Mota Fofaliya	CHC	44	CM Setu	No	Yes	No	No
24	Vadodara	Dabhoi	CHC	43	CPS	No	Yes	No	No

There are 24 Community Health Centres working as FRU in Gujarat out of which 14 Community Health Centres have sonography machines available with them and 10 CHC do not have machines available with them.

Out of 14 Community Health Centres working as FRU only 4 CHC (Viramgam Ahmedabad, Radhanpur Patan, Shamlaji Arvalli, Jambugam CHC Chota Udaipur) are operationalizing

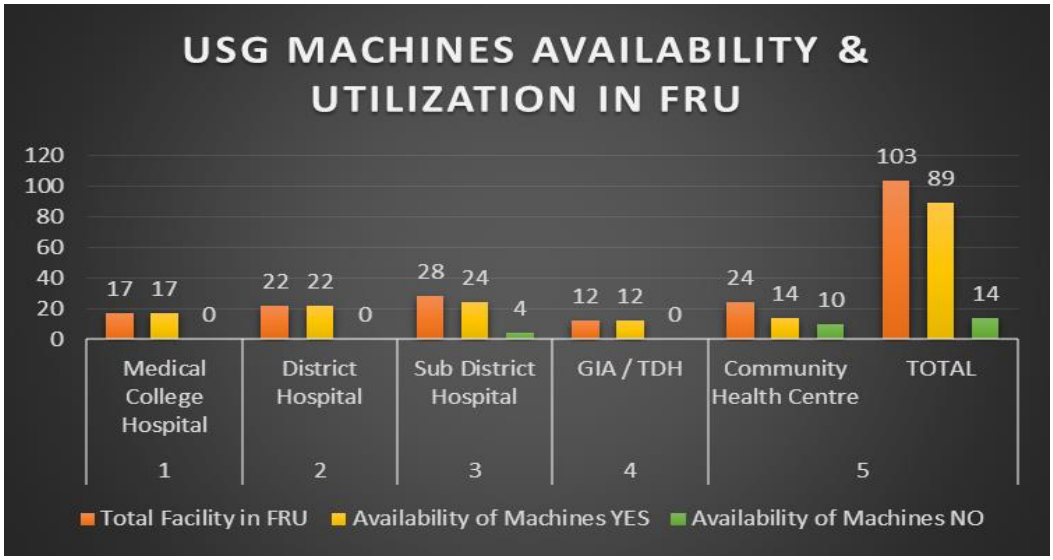
machines after availability of machines. Rest of all 10 Community Health Centres working as FRU are not operationalizing sonography machines.

Conclusion:

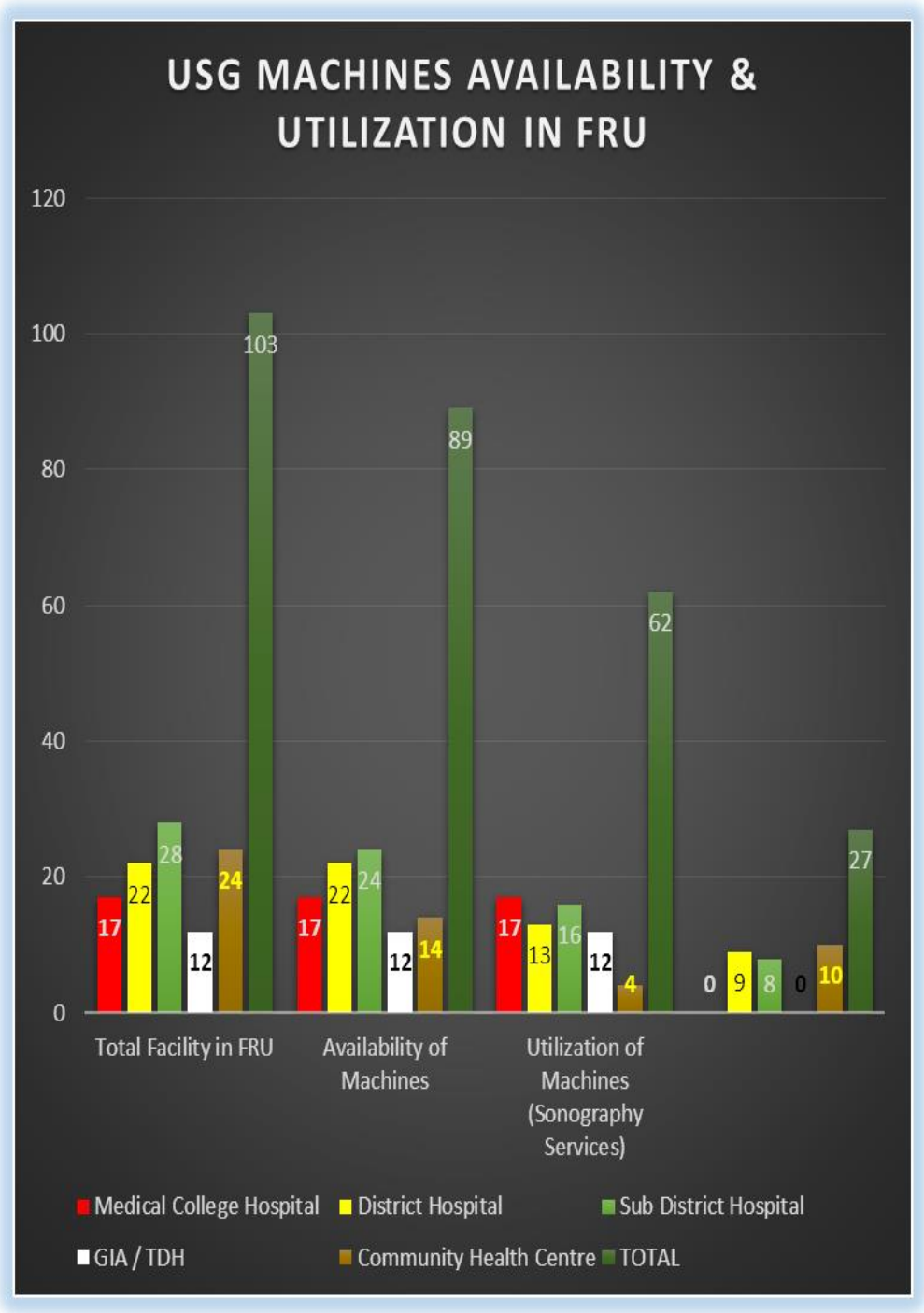
Table No:18:Summary Table

USG MACHINES AVAILABILITY & UTILIZATION IN FRU						
SN	Level Of Facility	Total Facility in FRU	Availability of Machines		Utilization of Machines (Sonography Services)	
			YES	NO	YES	NO
1	Medical College Hospital	17	17	0	17	0
2	District Hospital	22	22	0	13	9
3	Sub District Hospital	28	24	4	16	8
4	GIA / TDH	12	12	0	12	0
5	Community Health Centre	24	14	10	4	10
	TOTAL	**103**	**89**	**14**	**62**	**27**

Graph No:2:Summary of USG machines availability &utilization



Graph No:3: Summary of USG machines availability &utilization



Out of 103 First Referral Unit in Gujarat 89 FRU have sonography machines available with them, out of 89 also only in 62 facilities are functional with sosnography services.

Recommendation

1.All FRU should provide the mendatory USG services to each High Risk Mothers.

2.Rationalization of USG machines should be done ,so that utilization of machines can increase.

3.Available HR (specialist/obs/gyn/mbbs mo)should be trained for operationalization of USG services.

APPENDICES

References :

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Appendices:1: Questionner

USG MACHINES ASSESMENT FORM		
S.No	**Question**	**Response**
1	Name of District:	
2	Name of Taluka;	
3	Name of Facility:	
4	Name of Dean / CDMO/ Chief Supritendent:	
4.1	Dean / CDMO/ Chief Supritendent Specialization;	
4.2	Contact No & e mail ID:	
5	Average Monthly ANC Services at facility:	
6	USG Machine Available (If Yes than answer 6.1 question, if No than go directly to Question no. 09)	Yes No
6.1 6.1.1 6.1.2 6.1.2	If Yes than how many ? Serial No of All Registration no of all	
7	Type of USG Machine a) Static : b) Portable: c) Any other:	
8	Equipment Condition a) Working: b) Non Working: c) Under Repair: d) For Condemination:	
9	Human Resource Status a) Radiologist / Sonologist: b) Guynecologist / Obtetrician: c) CeMOC / BeMOC: d) MBBS MO with 6 month Training:	

Date: **Dean / CDMO / Chief Supritendent**
(Sign & Seal)

Place: