STANDARDS IN REPRODUCTIVE HEALTH

INFRASTRUCTURAL FACILITIES

STANDARDS SETTING PROCESS

It was found that application of the concepts of *interprofessionality*, *consumer participation* and representation to stake holders had helped in formulating standards which have a proper balance between technical perfection and practical and local relevance. Please see names of panel members with their background in Annexure I

Initially we conducted two full sessions of the panel comprising the technical as well as non technical members. However it was expressed by the non technical members themselves that their presence would hamper the development of standards at that stage and that therefore they would give their comments on the standards document once it was brought up by the technical members of the panel. Accordingly we conducted three further sessions of the technical panel to finalise the document from the side of the technical members. We had also taken care to include adequate number of technically qualified women and socially sensitive doctors in the technical members sessions. Subsequently we also conducted two sessions as an extended sub committee of the panel in Nellore, a district town in A.P, away from the city of Hyderabad, inviting practitioners from a rural and small town background to comment on the draft standards document prepared by the technical panel. The Sessions conducted and the topics discussed in each conference of the standards panel are mentioned in Chart I below. Subsequently a full session of the panel was conducted which consisted of the technical as well as non technical members, among whom were the representatives of women and consumer organisations, members from the Bureau of Indian Standards, Health policy researchers and others.

CHART I

SESSIONS OF THE STANDARDS SETTING PANEL

Date	Venue	Topic
Full Session of The Standards Setting Panel ***(Technical & Non Technical Members)***		
23-3-97	Hotel Dwaraka, Hyderabad	Standards for Infrastructural Facilities
31-8-97	Hotel Ashoka, Hyderabad	Standards for Equipment
Technical Members Sessions		
27-9-97	Hotel Ashoka, Hyderabad	Standards for Equipment.
20-11-97	Hotel Ashoka, Hyderabad	Standards for Human Power and Other Physical Facilities.
Meetings Of The Extended Sub Committee On The Suitability Of The Developed Standards To Small Hospitals In Rural Areas And Small Towns		
18-1-98	People's Poly Clinic Conference Hall, Nellore.	Standards on Equipment and Human Power
8-2-98	People's Poly Clinic Conference Hall, Nellore.	Standards on Infrastructural and Other Physical Facilities
Technical Members Session		
21-3-98	Hotel Ashoka, Hyderabad	Review Of Revised Standards Document Incorporating The Recommendations Based On The Two Sessions Of Extended Sub Committee At Nellore.
Full Session of The Standards Setting Panel ***(Technical & Non Technical Members)***		
17-5-98	Hotel Dwaraka, Hyderabad	Review of the Document by Non Technical Members With Technical Members

1. Normal delivery
2. Caesarean section
3. Medical Termination of pregnancy (MTP)
4. Basic diagnostics for few common gynaecological diseases.

Formulation of standards was based on the structure aspect which covers :

1. Minimum Infrastructural facilities needed.

2. Minimum Human power needed

- **Type**
- **Number**
- **Qualifications**

3. Minimum equipment needed

4. Minimum Physical facilities needed

While there is a minimum standard applicable for even the smallest hospital, variations from this minimum was worked out for hospitals of different sizes. Bed strength is taken as the criterion for determining the size of the hospitals.

CONDUCTING SINGLE INSTITUTIONAL NORMAL DELIVERY

BASIC INFRASTRUCTURAL FACILITIES FOR HOSPITALS (Mostly Common For Other Three Procedures Also)

Note: N = Needed, NN = Not Needed, **No.** = Number of rooms/ facility, **Area** = Area needed for each facility, **OPT** = Optional , **Sqft** = Square feet, **Ft** = feet

S.N	Facility	Minimum facilities		1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
1	Beds																	
	Area per Bed	N	60-75 Sqft	N	-	50 Sqft	N	-	60-75 Sqft	N	-	60-75 Sqft	N	-	60-75 Sqft	N	-	60-75 Sqft
	Space between the Beds	N	Footend of one bed to the footend of another bed opposite to it - 1.2 mts-1.5 mts. Space between the two beds- 1.2 mts From the headend of the bed to the wall- 0.3 mts	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
Note Please turn over to see the specifications of space between the beds in the figure 1.1																		
2	Bed measurement	N	Length 198 cm Breadth- 99 cm Height 61 cm	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
3	Washing area	N	-	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
4	Communication facility (Telephone/Intercom)	N	-	OPT	-	-	OPT	-	-	OPT	-	-	N	-	-	N	-	-
Note Panel suggested that it is desirable to have telephone and intercom facilities even for smaller hospitals as this could save lot of time and helps to provide prompt services to the patient. But in rural areas as it is very difficult to get telephone connections it was suggested as optional for smaller hospitals																		
5	Drainage facility (closed)	N	-	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
Note Advised to have closed drainage system. Panel also suggested to have septic tanks in rural areas and soakage pits should be attached to these septic tanks to drain all the hospital waste water. (Please see the Standards for Sokage pits at the end of this section on infrastructural facilities)																		

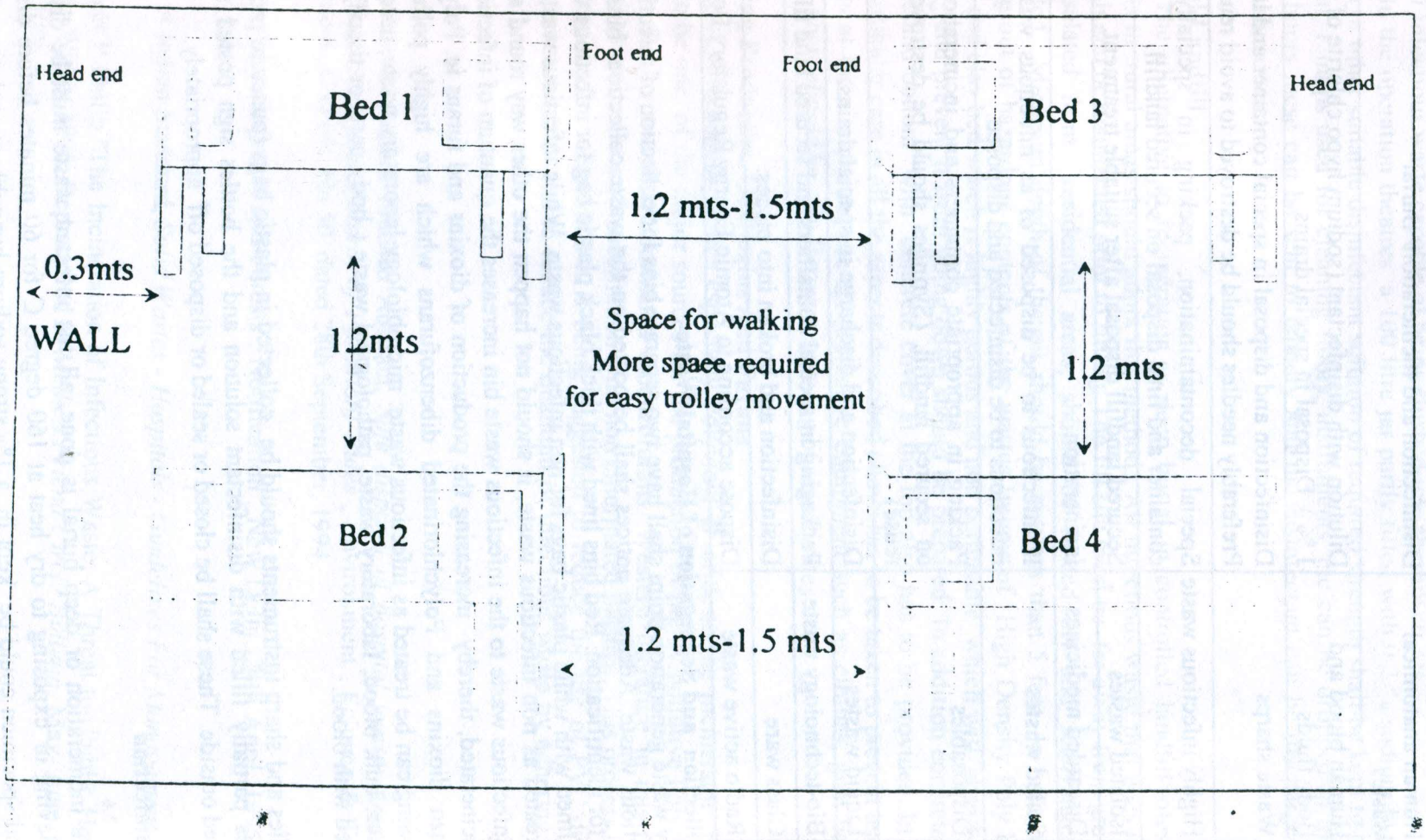
S.N	Facility	Minimum facilities		1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
6	Fire extinguishing facility	N	-	Desirable	-	-	N	-	-	N	-	-	N	-	-	N	-	-
Note: Panel suggested that fire extinguishing facility is desirable in smaller hospitals (< 15 bedded), staircase should be free from fire accidents. They felt a pipe line should be taken from the overhead tank which is separately meant for fire extinguishing facility and this should be near the stair case if the nursing home has more number of floors																		
7	Electricity (Alternate Power supply/ Generators / Inverters)	N	-	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
Note: Panel suggested that Generator is a must for > 15 bedded hospitals, for smaller hospitals (< 5 bedded) generator is desirable and alternate power supply is a must, or rechargeable lamps should be available in these hospitals.																		
8	Lighting & Electrical fittings	N	-	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
Note : Panel suggested adequate lighting and electrical fittings should be there in the hospital.																		
9	Hand washing facility	N	-	N	-	-	N	-	-	N	-	-	N	-	-	N	-	-
Note: Suggested to have hand washing facility in all the wards for staff and patients separately.																		
10	Lavatory and Bath for staff (12 sqft for WC, 16 Sqft for Baths)	N	-	N	2	30 Sqft Each	N	3	30 Sqft Each	N		30 Sqft Each	N		30 Sqft Each	N		30 Sqft Each
Note Lavatory for males and females separately																		
11	Lavatory and Bath for patients (12 sqft for WC, 16 Sqft for Baths)	N	-	N		30 Sqft Each	N		30 Sqft Each	N		30 Sqft Each	N		30 Sqft Each	N		30 Sqft Each
Note Lavatories should be European and Squatting type each one for females, one separate lavatory for males (attendants)																		
12	Lockers for patients	N	-	N			N			N			N			N		
Note Lockers for patients is must 1 patient: 1 locker																		
13	Sterilization facilities-Vertical auto claves / Dry steam steriliser	N	-	N			N			N			N			N		
Note: Please see the note on Precautions in sterilisation at the end of this section on infrastructural facilities.																		
14	Transport (Ambulance)	N	-	N*			N*			N*			N			N		

S.N	Facility	Minimum facilities		1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
Note: N = Needed, NN = Not Needed. * N= Needed in smaller hospitals, it was suggested by the panel that a group of hospitals should come together and should have the common Ambulance facility. Panel also suggested that those nursing homes who cannot afford for an ambulance can hire it. Panel felt that one of the major cause of maternal mortality is lack of transport in time. Keeping in view this problem in rural areas various suggestions were given like encourage unemployed youth to start ambulance facility, providing loans, incentives, encourage NGO's to take up ambulance facilities, or panchayat should provide this facility. They strongly suggested that some sort of transport is a must. They have also come out with problems in rural area, where tractors are used in transporting the patients. They felt the tractors should have shock absorbers and adequate care should be taken to shift the patient safely. Suggestions were given to train the technicians in providing emergency care and certificate courses should be introduced to train technicians in handling emergency cases in rural areas. Panel have also pointed out the need for training paramedical staff and high priority was given in provision of immediate resuscitation measures before referring the patient.																	
15	Waste disposal facility 1. Disinfected Land Filling (1) 2. Incinerators (2)	N	-	N(1)			N(1)			N(1)			N(2)		Incinerator	N(2)		Incinerator
Note: Panel suggested that in rural areas waste disposal could be by burning. Soiled cotton and other waste material like placentas, dead foetus, biodegradable waste etc., can be buried. Please see the ' Standards for disposal of infectious waste' at the end of this section on infrastructual facilities.																		
16	Water facility (24 hours water supply)	N		N			N			N			N			N		
	Water storage facility in litres based on bed strength	-	400 litres per bed/ day	N			N			N								
Note: Panel suggested sump for water storage in rural areas and overhead and under ground tanks in larger hospitals. Panel stressed the need to have an under ground tank in all hospitals so that if there is any water problem they can get tankers from outside and fill them.																		
17	Visitors room	1	Must															
Note: Panel viewed visitors room is a must, it is only for inpatients and it should be near the entrance. They felt for smaller hospitals (1-5 bedded) no separate visitors room is required and for labour room and theatre common visitors room can be provided.																		
18	Consultation/ Examination room	-	Desirable															
Note: Panel felt for examination and consultation no separate rooms are required in smaller hospitals (1-15 bedded), but in larger hospitals separate rooms for examination and consultation are mandatory(>15 bedded hospitals) and these rooms should be part of Admission room and Outpatient department																		
19	Preparation room	-	Desirable *															
Note : Panel decided that for preparation of patient (e.g. preoperative care)no separate room is needed in smaller hospitals < 15 bedded but separate room is a must for < 15 bedded hospitals.																		
20	Treatment room	-	Desirable															

S.N	Facility	Minimum facilities		1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
Note : No separate room for treatment (e.g. removing stitches etc.) of patient is needed in smaller hospitals < 15 bedded where as it is mandatory in larger hospitals.(> 15 bedded.																		
21	Nurses station	N	Must															
Note: Panel suggested "Nurses station" a must in all level of hospitals. (This area is for nurses to work e.g recording, preparing for procedures and for other administrative works.)																		
22	Lab facility	N	Must															
Note: A minimum of lab tests like Hb% , Urine for albumin and sugar, grouping and Rh typing should be available in all the level of hospitals.																		

Note: N = Needed, NN = Not Needed, OPT = Optional, Sqft = Square feet, Ft = Feet

Figure 1.1


Head end
Bed 1
Foot end
Foot end
Bed 3
Head end
1.2 mts-1.5mts
0.3mts
WALL
1.2mts
Space for walking
More spaee required
for easy trolley movement
1.2 mts
Bed 2
Bed 4
1.2 mts-1.5 mts

STANDARDS FOR DISPOSAL OF INFECTIOUS WASTE

	Waste Class	Treatment and Disposal Options
1	Human anatomical wastes	Disinfection and Incineration/ Burial
2	Human blood and Body fluids	Dilution with disinfectant (sodium hypo chlorite of 1 %), Disposal in special drains
3	Waste sharps	Disinfection and disposal in special container and landfill. (e.g Preferably needles should be destroyed to avoid reuse)
4	Highly infectious waste	Special decontamination, packing in specially designed container and final disposal on secured landfill.
5	Isolated wastes	Secured landfill disposal after suitable treatment.
6	Discarded medicines	Incineration
7	Soiled wastes	If infectious to be disposed of as infectious wastes, if non infectious to be disinfected and disposed.
8	Disposables	Packing in appropriate containers and incineration/ disposal on secured landfill. (Syringes should be destroyed to avoid reuse)
9	Liquid wastes	Disinfection and discharge in special drains.
10	Bio-technology waste	Packaging in special containers and secured land fill.
11	Glass ware	Disinfection and broken into pieces.
12	Radio active waste	Dispose according to Atomic Energy Regulatory Board

1. Collection and Segregation of Hospital Waste

Every waste generation point shall have two separate bins for collection of infectious and non infectious waste. Adequate notices shall be posted on the waste collection bins and plastic bags for identification. Red bins lined with thick black plastic bag for infectious waste. Green bins lined with white plastic bags for non infectious waste. While infectious waste should not get treated as non infectious waste, it should not happen the other way round also. Adding non infectious waste to the infectious waste bin increases the quantum of infectious waste to be incinerated, thereby increasing the production of dioxins and furans ie. Polychlorinated dibenzo dioxins and Polychlorinated dibenzofurans which are highly pollutive. The following can be treated as infectious waste: microbiology laboratory waste, used sharps and needles, bulk blood, laboratory waste, pathological waste (body parts or tissue) and items stained with blood.

Needles and sharp instruments should be collected in plastic bags (puncture proof) or glass bottles partially filled with disinfectant solution and the bottles sign posted with danger marked outside. These shall be closed or sealed or disposed off appropriately.

2. Disinfection

Before incineration or deep burial is done, all the infected waste must be disinfected by autoclaving or exposing to dry heat at 160 degree C for 60 minutes before disposal. All clinical specimen could be kept in a 1% strong sodium hypochlorite solution. Body fluids and Blood suction fluid, excretion, secretions, and other blood contaminated material like

pus should be kept in disinfectant solution for six hours and afterwards it can be carefully poured down in a drain connected to sanitary sewer. Sanitary sewer can be used to dispose off other infectious waste capable of being flushed into the sewer.

In the operation theatres a 100 litre jar partly filled with 0.2 % sodium hypochlorite solution or other suitable disinfectant solution of required strength shall be kept to be used as waste jar. Mops used for cleaning floors, instruments, etc can be dropped in this jar and after 6 hours these can be sent to laundry and the disinfectant can be discharged through sinks to the sewer.

Secured Landfill

The alternative to incineration is deep burial in controlled landfill sites. Smaller hospitals in rural areas should adopt this method. All infectious waste that goes in for land filling should be disinfected prior to filling. The fill site must be far away from ground water sites, isolated from residential areas, should be fenced off and scanvangers strictly prohibited. Minimum depth of the pit should be not less than 5 feet. In order to prevent leaching out of hazardous contents of the wastes linings of High Density Poly Ethelyne (HDPE) and clay bed which is highly porous and non permeable which will absorb the likely leaching and prevent it from going down should be prepared In addition concrete lining on all sides and bottom with concrete cover at the top also has to be provided. In low lying areas particular care in all the aspects described above has to be taken to prevent leaching. Workers at the site should use all protective equipment such as clothes, gum boots, hand gloves. There should be also frequent spraying of insecticides.

Reducing Production Of Dioxins And Furans

Burning of chlorinated plastics especially Polyvinyl chloride in the incinerator has been found to be one of the major sources for the production of highly pollutive Polychlorinated dibenzo dioxins and Polychlorinated dibenzofurans. Western literature in this regard has begun to think in terms of substitution with non chlorinated plastics. This process is likely to take time. In the meanwhile it is being suggested to reduce the use of PVC disposables, wherever not needed and to reduce the quantum of infectious waste by adhering to a strict list.

Source:

Government of Andhra Pradesh Abstract, *Safe disposal of hospital waste- Amendment to ... (Prevention and Control of Pollution) Rules* , Environment , Science & Technology Department , G O Ms No 50, dated 28th September, 1994

Ministry of Environment and Forests : Notification , New Delhi, 24th April, 1995. S.O 378 (E) draft rules.

Bureau of Indian Standard, *Solid Wastes - Hospitals - Guidelines For Management*

Coppinger P Philip "The Incineration of Infectious Waste: A Threat to Public Health" *New Solutions* Winter 1996, Reproduced in *Medico Friend Circle Bulletin*, May- June and July - August 1996

STANDARDS FOR SOAKAGE PIT

Soak pit/ Seepage pit:

Seepage pit with filling :

These are suitable for location near trees. The seepage pits may be of any suitable dimension of 90 cm but less than 100 cm in depth below the invert level of the Inlet pipe. No masonry lining is used except for the top 90 cms at which level the inlet pipe is taken as an antimosquito measure. The top lining may be with brick, stone or concrete block with mortar joint. The top of the masonry ring may be kept above ground level to prevent damage by flooding of the pit by surface run off. The filling may be with stone or brick aggregate. The top lining may be made to rest of 30 cms thick outer casing with coarse sand. The inlet pipe may end in a bend discharging into a brick chamber with open joints as shown in the figure. The entire pit should be filled with loose stones or brick aggregates.

Shallow Seepage pit without filling but with lining : The seepage pit may be of any suitable shape with the least cross-sectional dimension of 90 cms but not less than 100 cms indepth below the invert level of the inlet pipe. The pit may be lined with stone, brick, or concrete blocks with open joints which should be backed with atleast 7.5 cms of clear coarse aggregate. Lining above the inlet should be finished with mortar. In the case of pits with large dimension the top portion may be narrowed to reduce the size of the RCC cover slab. The slab may be removable pre cast RCC slab with an opening at the centre for ventilation. The inlet pipe may be taken down to a depth of 90 cms from the top as an anti mosquito measure.

In stone packed soak pits, the sludges fills the voids and the blockage creates flooding on ground surface. The stones should be removed for drying, cleaning and refilling for proper functioning of the soak pit.

Source:

Husain S K , *Text book of water supply and sanitary engineering*,II edition, Oxford & IBH Publishing Co. pvt. Ltd. New Delhi, p. 560-61.

Bureau of Indian Standards, *Hand book on Water Supply and Drainage*, New Delhi. p. 143-45.

PRECAUTIONS IN STERILIZATION

Infection control measures are sufficient to prevent transmission of HIV- 1 & 2 and other virus in Health care Settings These consists of

- Decontamination of used instruments, equipments and material.
- Strict aseptic and antiseptic practice by effective use of sterilization and disinfection.
- Barrier precautions to prevent transmission of infection.

Infection control in health care settings consists of :

- Precautions in relation to blood and other body fluids.
- Precautions in relation to injections and skin piercing.
- Effective use of sterilization and disinfection.

Precautions in relation to blood and other body fluids:	*Handwashing:*	• Hands should be washed immediately after removal of protective gloves. • Body parts that have been contaminated with blood and body fluids should be washed thoroughly with soap and water.
	Gloves and other attire:	• Wear gloves for all direct contact with blood and body fluids. • If gloves are not available use forceps, a towel, gauze or even any material such as a plant leaf may be employed to hold a blood stained needle or syringe in rural conditions. • If gloves are not disposable, they should be disinfected, washed and sterilized after contact with each patient. • When handling sharp instruments extra heavy duty gloves should be used and the instruments should be handled with extreme care.
	Procedures	• Eyes, nose and mouth should be protected with a face shield or mask and glasses, and suitable gowns or aprons should be worn during surgeries, child birth or any procedure where there is splashing of blood
	Mouth to mouth resuscitation:	• To reduce occupational exposure to HIV, mouth piece, resuscitation bags, or other ventilation devices should be used disposable or throughly clean and disinfect immediately after use. • Mucous extraction should be done by electrical hand operated or foot operated suction machines
Cleaning and decon- taminating spills of blood or other body fluids.		• Disinfectants like 0.1-1.0% of available chlorine /household bleach / sodium hypochlorite can be used as solution • Any surface contaminated with blood or body fluid must be disinfected by covering it with absorbent material then disinfectant fluid should be poured around the contaminated area and then over the absorbent material and left for not less than 10 minutes. • Gloves should be worn during the cleaning and decontaminating procedures.

Precautions in relation to injections and skin piercing:	• Restrict unnecessary injections and other skin piercing procedures. • Single- use (disposable) instruments should be used once only. After use they should be destroyed under careful supervision. Multiple-use (reusable, instruments should always be disinfected, washed and appropriately sterilized according to existing guidelines. • Chemical disinfection must not be used for needles and syringes. • Autoclaved reusable and pre-sterilized disposal needles and syringe are equally safe
Precautions to relation to laboratory speci- mens:	• Should always wear gloves when handling and processing specimens of blood and other body fluids • Mouth pipeting should not be permitted. • All open wounds on hands and arms should be covered with a water-tight dressing while handling blood and body fluids • Specimens should be placed in screw-capped leak proof containers to prevent leakage during transportation. Avoid contamination of the outer surface of the container of the specimen. When samples are mailed or otherwise shipped, they should be placed inside unbreakable plastic containers. • Any spillage of blood or other body fluids on the table, tops or any other surface should immediately be decontaminated with a disinfectant such as sodium hypochlorite 0.5 % before cleaning. • Specimens should be carefully disposed off by pouring them down a drain connected to a sewer. If this is not possible, blood and body fluids should be decontaminated with an appropriate disinfectant such as sodium hypochlorite 1.0 % or available chlorine before disposal. • Hands must be carefully washed after laboratory activities/ procedures.
Precautions in relation to invasive procedures:	• Gloves and surgical mask should be worn for all invasive procedures. • Protective glasses or face shield , gown or apron should be worn if blood splashed are likely. • Individuals performing or assisting in vaginal or caesarean deliveries should wear gloves and gown or apron till the infants complete care.
Management of parenteral and mucous membrene exposure to blood and body fluids:	• If a glove is torn or a needle prick or other injury occurs, the gloves should be changed, wash hands as soon as the safety of the patient permits. The needle or instrument involved in the accident be removed from the sterile field • In parenteral needle prick injury, cut or mucous membrane exposure to blood or other body substances, or cutaneous exposure of non-intact skin that is chopped, abraided, or afflicted with dermatitis involving blood, the contaminating blood or body fluids must be washed away promptly. • Bleeding should be encouraged if there is a wound, then the person must wash with soap and copious amounts of water (even if the there is no bleeding). • If the eyes have been contaminated they must be rinsed gently while open with tap water or saline Contact lenses are not considered a protective barrier against splashing of blood. Increased risk of infection may occur if eyes are irritated with infected blood or body substances. Contact lenses must be removed immediately after exposure, and before rinsing eyes. lenses must be cleaned in the usual manner, prior to reinsertion. • If blood gets into the mouth, it should be spit out and rinse the mouth with water several times.

Precautions in relation to non-invasive procedures:	• In vaginal, anal and rectal examinations, prostatic massage, measurement of intraocular pressure, tracheal laryngeal, throat and nasal examinations, and different imaging processes like echo-cardiography, ultra sound, X-ray and CAT scan it is highly possible that during some of these non-invasive procedures, break in the countinuity of the mucous membrane may be encountered which may result in contamination of instruments used for the examination Only sterile instruments, equipment or material should be used for such non-invasive procedures. After use they must be regarded as Contaminated and must not be used on other patients without proper disinfection and sterilization. • Immediately after the use of the instruments (Like vaginal speculum), proctoscope, nasal speculum and instruments used for laryngeal and treacheal examination, should be immersed in suitable disinfectant fluid for at least 20 minutes After disinfection, they may be washed/ rinsed with water and preferably autoclaved. In the absence of an autoclave facility , the instruments used can be boiled for 20 minutes and then reused. • A high level of disinfection of the instruments and equipment can be achieved by continuous boiling for 20 to 30 minutes.
Effective use of sterilization and disinfection	• Instruments or devices that enter sterile tissue of the vascular system of any patient or through which blood flows should be sterilized before reuse. Devices or items that comes in contact with intact mucous membranes should be sterilized or exposed to high level of disinfection. Chemical sterilants may be used either for sterilization or for high level disinfection depending on contact time. • Contact lenses used in trial fittings should be disinfected after each fitting by using a hydrogen peroxide contact lens disinfecting system or, if compatible, with heat (78-8- degree C.) for 10 minutes. • Medical devices or instruments that require sterilization or disinfection should be thoroughly cleaned before being exposed to the disinfectants and the manufacturer's instructions for use of the disinfectant should be followed. Further, it is important that the manufacturer's specifications for compatibility of the medical device with chemical disinfection be closely followed • Studies has showed that HIV is inactivated rapidly after being exposed to commonly used disinfectant In addition to commerically available disinfectants, a solution of sodium hypochlorite (household bleach) prepared daily is inexpensive and effective. Concentrations ranging from approximately 500 ppm(1: 100 dilution household bleach) sodium hypochlorite to 5000 ppm (1: 100 dilution of houselhold bleach) are effective depending on the amount of organic material (e g Blood, mucus) present on the surface to be cleaned and disinfected . Commercially available disinfectant may be more compatible with certain medical devices that might be corroded by repeated exposure to sodium hypochlorite, especially to the 1 100 dilution.

Source : Notes on HIV/AIDS & Prevention of HIV in health care settings.AIDS Control project, Government of A.P
Published by The Director of AIDS control project, Health and Medical department, Government of A.P , Sultan Bazar, Hyderabad.

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Effective use of sterilization and disinfection	• Instruments or devices that enter sterile tissue of the vascular system of any patient or through which blood flows should be sterilized before reuse. Devices or items that comes in contact with intact mucous membranes should be sterilized or exposed to high level of disinfection. Chemical sterilants may be used either for sterilization or for high level disinfection depending on contact time. • Contact lenses used in trial fittings should be disinfected after each fitting by using a hydrogen peroxide contact lens disinfecting system or, if compatible, with heat (78-8- degree C.) for 10 minutes. • Medical devices or instruments that require sterilization or disinfection should be thoroughly cleaned before being exposed to the disinfectants and the manufacturer's instructions for use of the disinfectant should be followed. Further, it is important that the manufacturer's specifications for compatibility of the medical device with chemical disinfection be closely followed • Studies has showed that HIV is inactivated rapidly after being exposed to commonly used disinfectant In addition to commerically available disinfectants, a solution of sodium hypochlorite (household bleach) prepared daily is inexpensive and effective. Concentrations ranging from approximately 500 ppm(1: 100 dilution household bleach) sodium hypochlorite to 5000 ppm (1: 100 dilution of houselhold bleach) are effective depending on the amount of organic material (e g Blood. mucus) present on the surface to be cleaned and disinfected . Commercially available disinfectant may be more compatible with certain medical devices that might be corroded by repeated exposure to sodium hypochlorite, especially to the 1 100 dilution.

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STANDARDS IN REPRODUCTIVE HEALTH

HUMAN POWER

CONDUCTING SINGLE INSTITUTIONAL NORMAL DELIVERY

HUMAN POWER

- *Type of personnel needed*
- Note : **N**= Needed, **NN** = Not needed, **PT** = Part Time, **FT** = Full Time, **OC** = On Call, **OPT** = Optional, **Deliv**= Deliveries

S.L	Personnel	Bed Strength														
		1-5 Beds / 2 Deliv / N/NN	No.of persons needed	Time	6-15 Beds / 5 Deliv / N/NN	No.of persons needed	Time	16-30 Beds / 8 Deliv / N/NN	No.of persons needed	Time	31-50 Beds / 10 Deliv / N/NN	No.of persons needed	Time	51-100 Beds / 20 Deliv / N/NN	No.of persons needed	Time
1	Auxiliary Nurse Midwife	N	4	FT 1/ Shift	N	4	FT 1/ Shift	N	4	FT 1/ Shift	N	8	FT 2/ Shift	N	8	FT 2/ Shift
2	Diploma Nurse	NN	-	-	N	2	1/ Shift	N	4	FT 1/ Shift	N	4	1/ shift	N	6	On shift
3	Graduate Nurse	OPT	-	-	OPT	-	-	OPT	-	-	OPT	-	-	OPT	-	-
4	MBBS graduate	N	1	PT On call	N	1	FT	N	2	1/ FT 1 On call	N	4	FT 1/ shift	N	4	FT 1/ shift
5	MBBS graduate with Diploma in Gynaecology and Obstetrics	NN	-	-	NN	-	-	N	1	PT On call	N	1	FT On call	N	2	FT
6	MBBS graduate with MD in Gynaecology & Obstetrics	NN	-	-	NN	-	-	NN	-	-	N	1	On call	N	1	FT
8	Paediatrician	NN	-	-	NN	-	-	NN	-	-	N	1	PT	N	1	FT
9	Anaesthetist	NN	-	-	NN	-	-	N	1	PT On call	N	1	PT On call	N	2	On Call
10	Class four employees	N			N			N			N			N		
11	Lab Technician	*NN	-	-	*NN	-	-	N			N			N		

* Qualified ANM, Diploma Nurses must be able to do minimal investigative procedures like Haemoglobin %, Urine for Sugar, Albumin, Ketones, blood grouping and Rh.

COMMENTS:

CONDUCTING SINGLE INSTITUTIONAL NORMAL DELIVERY

HUMAN POWER

- **Qualifications**

Minimum qualifications for selection of personnel

S.N	Personnel	Comments (any additions/deletions please specify)
1	Auxiliary Nurse Midwife who has passed her 18 months training from a Government MPHW (F) Institute/ Government recognised MPHW (F) Training institute.	OK
2	Diploma Nurse who has passed her 3 year course from a Government School of Nursing/ Government recognised School of Nursing.	OK
3	Graduate Nurse who has passed her 4 year degree course from a Government Nursing College / Government recognised Nursing College.	OK
4	Doctor who has passed his/her MBBS from a Government Medical College /Government recognised Medical College. (Senior houseman ship after MBBS in OBG Dept. preferred.)	O.K
5	Doctor who has passed his / her MBBS and diploma in Gynaecology and Obstetrics from Government Medical College /Government recognised Medical College.	OK
6	Doctor who has passed his/her MBBS from a Government Medical College / Government recognised Medical College & MD in Gynaecology and Obstetrics in Government /Government recognised Medical College.	OK
7	MBBS , MD in Paediatrics / MBBS graduate with training in Paediatrics for atleast 3 years / MBBS atleast Diploma in Paediatrics	O K
8	MBBS , MD in Anaesthesia/ MBBS graduate with training in Anaesthesia atleast for 3 years / MBBS atleast Diploma in Anaesthesia.	O K
9	Qualified Lab Technician who has completed his/ her training in government institution or government recognised institution.	O K
10	Class IV Employees (Orientation on cleaning procedures, danger signals during labour, lifting and transferring patients from bed to stretcher, etc.,).	O K

COMMENTS:

CONDUCTING SINGLE CAESAREAN SECTION

HUMAN POWER

- Type

Note : N= Needed, **NN** = Not needed, **PT** = Part Time, **FT** = Full Time, **OC** = On Call, **OPT** = Optional, **Caesa** = Caesarean's

S.L	Personnel	Bed Strength														
		1-5 Beds / 1 Caesa / N/NN	No.of persons needed	Time	6-15 Beds / 3 Caesa / N/NN	No.of persons needed	Time	16-30 Beds / 4 Caesa / N/NN	No.of persons needed	Time	31-50 Beds / 5 Caesa / N/NN	No.of persons needed	Time	51-100 Beds / 8 Caesa / N/NN	No.of persons needed	Time
1	Diploma Nurse/ ANM*	N			N			N			N			N		
2	Graduate Nurse	OPT			OPT			OPT			OPT			OPT		
3	MBBS graduate with training in Gynaecology and Obstetrics for atleast 3 years (OR)	N			N			N			N			N		
4	MBBS graduate with Diploma in Gynaecology and Obstetrics. (OR)	N			N			N			N			N		
5	MBBS graduate with MD in Gynaecology & Obstetrics.	OPT			OPT			OPT			OPT			OPT		
6	MBBS , MD in Paediatrics / MBBS graduate with training in Paediatrics for atleast 3 years / MBBS with Diploma in Paediatrics	OPT			OPT			N			N			N		
7	MBBS , MD in Anaesthesia / MBBS graduate with training in Anaesthesia atleast for 3 years / MBBS with Diploma in Anaesthesia	N			N			N			N			N		
8	Lab technician	N			N			N			N			N		
9	Class four employees (Theatre Assistant preferable a male to lift cylinders etc.,)	N			N			N			N			N		

COMMENTS: * ANM's with two years theatre experience is recommended. Diploma Nurse should be theatre trained. Need class IV employees like Theatre boys and shifting boys.

CONDUCTING SINGLE CAESAREAN SECTION
HUMAN POWER

- *Qualifications of the personnel*

S.No	Personnel	Comments (any additions/deletions please specify)
1	Auxiliary Nurse midwife who has 18 months training in Government training institute or govt recognised institute and who has two years of theatre experience (trained by a surgeon).	OK
2	Diploma Nurse who has passed her 3 year course from a Government School of Nursing/ Government recognised School of Nursing with theatre experience.	OK
3	Graduate Nurse who has passed her 4 year degree course from a Government Nursing College / Government recognised Nursing College with theatre experience	OK
4	Doctor who has passed his/her MBBS from a Government Medical College /Government recognised Medical College/ who has training atleast three years in Gynae and Obstetrics. (OR)	O K
5	Doctor who has passed his / her MBBS and diploma in Gynaecology and Obstetrics .(OR)	OK
6	Doctor who has passed his/her MBBS from a Government Medical College /Government recognised Medical College & and MD in Gynaecology and Obstetrics in government /government recognised Medical College. (OR)	OK
7	Doctor who has passed his/her MBBS from a Government Medical College /Government recognised Medical College & and MD in Anaesthesia./ (OR) MBBS graduate who has three years experience in Anaesthesia	OK
8	Doctor who has passed his/her MBBS from a Government Medical College /Government recognised Medical College & and MD in Paediatric medicine. from Govt or Govt recognised institution./ (OR) MBBS graduate who has three years experience in Paediatrics.	OK
9	Qualified Lab Technician who has completed training in an government institution or recognised institution.	OK
10	Class IV Employees who has training in theatre	OK

COMMENTS:

CONDUCTING SINGLE MEDICAL TERMINATION OF PREGNANCY

HUMAN POWER

• *Number of personnel needed*

(Note : No. = Number of personnel needed, N= Needed, NN = Not needed, PT = Part Time, FT = Full Time, OC = On Call, OPT = Optional, MTP = Medical Termination of Pregnancy.

S.L	Personnel	Bed Strength															
		1-5 Beds	No.of persons needed	Time	6-15 Beds	No.of persons needed	Time	16-30 Beds	No.of persons needed	Time	31-50 Beds	No.of persons needed	Time	51-100 Beds	No.of persons needed	Time
		2 MTP			3 MTP			3 MTP			4 MTP			5 MTP		
		N/NN			N/NN			N/NN			N/NN			N/NN		
1	A Medical graduate qualified through, on the spot training "If he has assisted in the performance of 25 cases of medical termination of pregnancy in an recognised institute." (OR)	N			N			N			N			N		
2	MBBS graduate with six months housemanship in Obstetrics and Gynaecology (OR)	N			N			N			N			N		
3	MBBS graduate with Post graduate qualification in Gynaecology & Obstetrics (OR)	N			N			N			N			N		
4	MBBS graduate with three years of practice in OBG (for those doctors registered before the 1971 MTP Act was passed.) (OR)															
5	MBBS graduate with one year of practice in OBG (for those doctors registered on or after the date of commencement of the Act.) (OR)															
6	Diploma Nurse/ Auxiliary Nurse Midwife	N			N			N			N			N		
7	Class IV employees	N	2		N	2		N	2		N	4		N	6	

COMMENTS: For high risk MTP's MBBS with PG qualification in Obstetrics and Gynaecology is needed.

The medical personnel who are managing the deliveries/Caesarean section can also manage MTP's.

EXAMINATION OF COMMON GYNAECOLOGICAL CONDITIONS

HUMAN POWER

• Number of Personnel

Note : N= Needed, **NN = Not needed, PT** = Part time, **FT** = Full time, OPT = Optional

S.L	Personnel	Bed Strength														
		1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds				51-100 Beds	
		N/NN	No.of persons needed	Time	N/NN	No.of persons needed	Time	N/NN	No.of persons needed	Time	N/NN	No.of persons needed	Time	N/NN	No.of persons needed	Time
1	MBBS graduate (OR)/ MBBS graduate with experience in Gynae and Obstetrics (OR)	N	1	PT	N	1	PT	N	-	-	NN	-	-	NN	-	-
2	MBBS graduate with Diploma in Gynaecology and Obstetrics. (OR)	N	1	PT	N	1	PT	N	1	FT	N	1	FT	N	4	FT
3	MBBS Graduate with MD in Gynaecology & Obstetrics.	NN	-	-	NN	-	-	NN			N	2	FT	N	2	FT
4	Graduate Nurse	OPT			OPT			OPT			OPT			OPT		
5	Diploma Nurse	OPT			OPT			OPT			N			N		
6	Auxiliary Nurse midwife	N			N			N			N			N		
7	Class IV employees	N			N			N			N			N		
Note: One qualified person for 50 Gynae out patients was suggested as ideal for any set up.																

COMMENTS:

EXAMINATION OF FEW GYNAECOLOGICAL CONDITIONS

HUMAN POWER

• Qualifications of the Personnel

SL	Personnel	Remarks(Any deletions or additions please specify)
1	Qualified MBBS graduate from government medical college/ government recognised institution	O.K
2	Qualified MBBS graduate with Diploma in Gynaecology and Obstetrics from government medical college/ government recognised institution	O.K
3	Qualified MBBS graduate with MD in Gynaecology and Obstetrics from government medical college/ government recognised institution	O.K
4	Graduate Nurse who has passed her 4 year degree course from a Government Nursing College / Government recognised Nursing College with theatre experience	O.K
5	Diploma Nurse who has passed her 3 year course from a Government School of Nursing/ Government recognised School of Nursing.	O.K
6	Auxiliary Nurse midwife who has passed her 18 months training from a Government MPHW (F) Institute/ Government recognised MPHW (F) Training institute/	O.K

STANDARDS IN REPRODUCTIVE HEALTH

EQUIPMENT

Conducting Single Institutional Normal Delivery Equipment Needed : Note

1. In the table the numbers 1-5, 6-15, 16-30, 31-50, 51-100 refer to the bed strength of maternity and female wards of hospitals. It is unlikely to have more than 100 beds in these two categories in private hospitals. It is true that smaller hospitals do not maintain separate maternity wards. In such cases the maternity bed strength and general bed strength overlap.
2. In the second row we have mentioned the number of deliveries that could take place in hospitals of various bed strengths. It was assumed that two deliveries could take place per day in 1-5 bedded hospitals, five in 6- 15, eight in 16-30, ten in 31-50, and twenty in 51-100 bedded hospitals.
3. In the third row we have mentioned the number of instrument sets required in various hospitals based on the number of deliveries. It was suggested that double the number of instruments should be maintained, i.e., 4 sets of instruments for two deliveries. The justification being two sets should be ready for conducting two deliveries and the remaining two would be sent for autoclaving or kept in store.
4. *The minimum equipment needed for larger hospitals will be different from the smaller hospitals. Requirements may change according to the size of the hospitals.* Some instruments need not be maintained in the smaller hospitals, due to considerations of economic viability and on account of the small number of cases they may be handling. *For e.g., Opthalmoscope* could be necessary in larger hospitals as number of complicated cases would be more and as it is costly smaller hospitals may not need them. Hence *separate columns are provided with regard to larger hospitals to mention the minimum equipment for those categories. So it is specifically mentioned in those columns from which category of bed strength such instruments are needed and in what numbers.*
5. Few equipment are calculated according to the number of labor tables and those are specifically mentioned in the corresponding rows.

The instruments have to be updated from time to time, and they will have to be added on to the list.

CONDUCTING SINGLE INSTITUTIONAL NORMAL DELIVERY

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
	EQUIPMENT/ INSTRUMENTS							
	Instruments Specific For Normal Delivery							
1	Apron (Plastic)	-	2					
Note & Comments: : Water proof aprons are desirable (preferably Plastic aprons). One apron is for the person conducting the delivery and another for the person assisting.								
2	**Delivery Set**							
	2.1 Bowl, Stainless steel (4")	IS : 3994-1993	3					
Note: One bowl for perineal care in the I st stage of labour, one bowl for perineal care in the 4 th stage of labour, a bowl for cotton swabs (to clean baby's eyes)								
	2.2. Dissecting forceps (6")	IS : 3643-1992	2					
	2.3. Artery forceps 8-10" (Kelly's)	IS : 3644-1992	4					
	2.4 Square tray big (Steel) for placenta	IS : 3992-1982	2					
	2.5. Scissors, cord cutting	IS : 7117-1973	1					
	2.6 Thread for cord tying	-	2					
	2.7. Sterile pads	-	3					
Note: One to support the perineum in the II nd stage, One for III rd stage, and One pad to place near the perineum(after perineal care) after delivery								
	2.8 Large cotton swabs to clean perineum (for mother) in the bowl	-	8-10					
	2.9. Small Cotton swabs (to clean baby's eyes)	-	3					
	2.10. Mucus sucker	IS: 6373-1971	2					
	2.11. Drapes	-	2					
Note & Comments: : Drapers: One fenestrated big towel over mother's abdomen and perineum , one to hold the baby after delivery.								
3	Baby resuscitation Tray							

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
	3.1. Ambu bag (Paediatric) With proper training	IS : 5602-1970	1					
	3.2. Oxygen mask	IS : 6190-1971	1					
	3.3. Endotracheal tubes (2 "& 2.5")	IS : 6581-1972	2					
	3.4. Paediatric Laryngoscope (working with cells)	IS : 4113-1986 (Part I & Part II)	1 (OPT)					
	3.5. Suction Catheters (Preferably disposable, paediatric)	IS : 5680-1969	2					
	3.6 Disposable Syringe	IS : 12050: 1986 (Reusable) IS: 10258:1995 (Only syringe Reusable)	1					
Note & Comments: : Panel members suggested all the resuscitation equipment are mandatory and training is must in handling these equipment								
4	Episiotomy Tray							
	4.1 Bowl ,Stainless steel for Xylocaine	IS : 3994 -1993	1					
	4.2 Forceps dissecting Toothed	IS : 3643 - 1992	1					
	4.3 Forceps dissecting Non toothed	IS : 3643-1992	1					
	4.4 Episiotomy Scissors	IS : 7103-1973	1					
	4.5 Sponge holder	IS : 7735-1992	2					
	4.6 Needle holder	IS : 7994 -1976 (Barron's) IS : 10599-1983 (Hegar's) IS : 10615-1983 (Bozemann's)	1					

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
	4.7. Cotton balls/Swabs to clean perineum	-	8-10					
	4.8. Sterile pads	-	2					
	4.9. Sterile drape (Fenestrated)	-	1					
	4.10. Sutures and ligatures, 1-0 Chromic catgut, ties and with needles- (curved, cutting & round body)	-	1					
	4.11 Tray (to accommodate all the instruments and pads etc., mentioned above)	-	1					
	4.12 Disposable 10 c.c Syringe needle for Xylocaine	IS : 12050 :1986	1					
5	Obstetric Forceps Tray							
	5.1 Mid low forceps/ Obstetric Furguson	-	1	NN	NN	N	N	N
	5.2 Obstetric, Wrigly's	-	1					
	5.3 Obstetric Cream ,Jar with cover	IS: 3997-1982						
	5.4 Urethral Catheter	-	1					
Note & Comments: Panel suggested that in smaller hospitals it is not desirable to have Midlow forceps as it need lot of expertise in handling it.								
6	Vacuum extractor	IS : 9756 - 1981 (Cups, Vaccume Extraction)	1					
Note & Comments: Maintenance of the equipment like washing, changing tubes, application of grease etc. should be done. Panel members felt vacuum extractor cannot be used by smaller hospitals easily. They felt it will be desirable for larger hospitals.								
GENERAL INSTRUMENTS/ OTHER ITEMS NEEDED								
7	Foetoscope	IS : 6565 -1972	1					

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
8	Cheatle forceps with jar	IS: 4094 -1967	1					
9	I/V Stand	IS : 5880 -1970	1					
10	Jugs	IS : 3424 -1985	1					
11	Mackintosh (for Labour table & Examination table)	-	1					
12	Opthalmoscope	IS : 8257 - 1976	1	NN	NN	NN	NN	N
Note & Comments: Opthalmoscope should preferably used in larger hospitals where complicated pregnancies will be more.								
13	Air way	IS : 3392 - 1965	1- Mother 1-Baby					
14	Oxygen Cylinder/Trolley/ gas	IS: 309-1992 (Cylinder) IS: 6207-1971 (Trolley) IS :5355-1978 (Flow meter)	1- Mother 1-Baby					
15	Pint measure	-	1					
16	Ryles Tubes (Paediatric)	-	1					
17	Shadow less lamp	-	1	NN	NN	NN	N	N
18	Angle poise lamp	-	1	N	N	N	N	N
Note & Comments: Panel suggested Angle poise lamp is a must if shadowless lamp is not available.								
19	Spygmomanometer with Stethoscope (Free and Standing)	IS: 3390 -1988 IS: 7652 -1975 IS: 3390 -1977 IS: 7652 -1975	1 set for two labour tables					

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
20	Thermometer Rectal	IS: 3055 -1994 (Part I)	1					
Note: One thermometer for each labour room.								
21	Torch working with cells	IS: 2083 -1991	1					
22	Labour table	IS: 6083 -1971	1					
23	Labour foot stool	-	1 Stool /1 Labour table					
24	Patient Trolley	IS: 4036 -1967	Trolley /2 delivery tables					
25	Dressing Trolley	IS: 4769 -1968	1					
26	Wheel chair	IS: 6571-1991	1	1	1	2	2	3
27	Weighing machine for baby	IS: 2489-1963	1 machine/ labour room					
28	Bed Pan (Steel preferably)	-	2					
29	Needle breaker	-	1					
30	Refrigerator Frost Free (165 Litres)	-	1	NN	NN	N	N	N
	DRUGS AND FORMULARY	**DRUG CODE**						
Source: APVVP Approved drug list & Hosptial formulary. Andhra pradesh Commissionerate of Medical Services (Vaidya Vidhana PArishad) Hyderabad- 500195 Abbreviations used SVP = Small Volume Parentral LVP= Large Volume Parentral , IV Intravenous, Inj., = Injection								
31	Methergin 0.2 mg/ml, Inj. 1ml (Uterine Stimulant)	148 SVP						
32	Oxytocin ,2 units/ml ,Inj., 2 units/ml (Oxytocic)	149 SVP						

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
Note Panel suggested Blood Bank is mandatory for more than 100 bedded hospitals, Blood Bank trained personnel/Bleed facility is desirable More than 30 bedded hospitals should have access to ambulance as this can be used for medical transport and can be used for Blood Banking facility.								
46	Plasma expanders			Desirable	Desirable	Desirable	Desirable	Desirable
Note : Panel suggested that it is desirable to have plasma expanders in all the hospitals as this can be used in the absence of blood in emergency and patient can be safely referred.								
	STERILISATION FACILITY STANDARD							
47	Instrument sterilizer (Autoclave with two bins)	IS : 3829 -1978 (Part I & II) IS : 3829 -1985 (PartIII) IS : 5022 -1989 IS : 8462 -1977	1					
	LINEN							
Note: Panel suggested linen should be in the ratio of 1 (Person) : 3 (Linen) one will be in use, one set will be sent for washing and one set will be in stock								
48	Bed sheets	IS:175-1989 IS: 745-1990 IS: 3776-1994	1:3					
49	Towels (80 x 80 cm)	IS : 855 -1979 IS : 856 -1971	3					
50	Gowns	-	1:3					
51	Wrappers	-						
52	Drapes	-						
53	Towels for hand washing	IS: 7057-1973						
54	Surgical mops	-						
55	Cleansing mops	-						

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
56	Caps	-						
57	Masks	-						
58	Mattresses	IS: 7933-1975	1: 1 bed					
	HOUSE KEEPING							
59	Cabinet for instruments	IS : 6877 - 1977						
60	Buckets Stainless steel	IS : 4768 - 1981						
61	Placenta disposing bin	-						
62	Dustbin for labour room waste	IS: 6904-1973	2 1-clinical 1-non-clinical					
63	Screen (Screen Stand)	IS : 4458 - 1967						
64	Chappals	-						
	CONSUMABLES							
65	Soap for handwashing	-						
66	Disinfectants/Antiseptic solutions	-						
67	Spirit	-						
68	Savlon (sterilising solution)	-						
	DISPOSABLES							
69	Sterile gloves (Preferably disposable)	IS : 4148-1989						
70	Suction Catheters (Preferably disposable, paediatric)	IS : 5680-1969	1					

S.N	Equipment	For single normal delivery		No. of Deliveries /Day (Number of equipment needed)				
		ISI NUMBER (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 deliveries	5 deliveries	8 deliveries	10 deliveries	20 deliveries
				4 sets	10 sets	16 sets	20 sets	40 sets
71	Intravenous sets	IS 9824-1981 (Part I Glass 1996,Part II Blood Taking Disposable 1995, Part III Transfusion set Disposable 1996)	1					
72	Sterile pads	-						
73	Sterile cotton swabs	-						
74	Syringes and needles 10 cc, 5 cc ,2 cc (disposable)	IS : 3236 -1992 (Syringe) IS : 3317 -1983 (Needle) IS : 10258 -1995 (Disposable) IS : 10654 -1991 (Disposable) IS : 11400 -1985 (Reusable)						
75	Urinary Catheters (Preferably disposable)	IS : 7253 - 1974 IS : 5680 - 1969 (Catheter Rubber All Sizes) IS: 11497 - 1985 (Foley's Rubber)	1					

CONDUCTING SINGLE CAESAREAN SECTION
EQUIPMENT NEEDED

•*EQUIPMENT FOR OPERATION THEATRE*

S.No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
1	Operating-room light (shadowless movable)	-	1					
2	Formalin vaporizer for fumigation	-	1 preferable					
3	Portable room lights with stands (for emergencies)	-	1					
4	Vertical Steam autoclave	IS: 3829-1985 (Part I & II-1978, (Part-III - 1985)	1					
5	Electric sterilizer for boiling instruments	IS:5022-1989	1					
6	Jar with Cheatle Forceps	-	2					
7	Cylindrical sterilizing bins (size of the bins according to the autoclave)	-	3					
8	Instrument trolleys	IS: 5631-1970	1					
9	Table to keep the sterile linen /glove	-	1					
10	Foot stools	-	1/ OT table					
11	Trolley/strecher with combination wheel and adjustable sides.	IS : 4035 - 1967	1					
12	Tiltable Operating table, universal frame-type with headpiece	IS : 6083 - 1971	1					
13	Instrument stands with trays (Mayo stand)	IS : 6905 - 1973	1					

S.No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
14	Stands with hooks for swabs	-	1	2 sets	6 sets	8 sets	10 sets	16 sets
15	Portable aspirating surgical suckers, foot-operated	IS:12417:1988	1					

Note & Comments: Panel suggested each hospital should have foot- operated suction apparatus or electrical suction apparatus with UPS connection or hospital with only electrical suction apparatus should also have foot-operated.

16	Stainless steel buckets with covers	IS: 4768-1981	2					
17	Dressing trays Medium	-	1					
18	Dressing trays Large	-	1					
19	Covered instrument trays 8" x 12"	-	1					
20	Instrument trays with handles	-	1					
21	Instrument and catheter trays	-	1					
22	Stainless-steel jugs: 4 litre, graduated	-	1					
23	Utility basins, 3 liter stainless steel	-	2					
24	Washable foot wear (Shock proof)	-	Sufficient No. with assorted size					
25	Graduated drainage (Collecting) bottles , glass 1.5 liter bottles for suction apparatus	-	1					
26	Heavy-duty "counter" scissors	-	1					
27	Latex tubing 10.0 mm inner diameter (for suction apparatus)	-	1					
28	Connectors for tubing, assorted, including T-shape and Y-shape	-	1					
29	Utility apron, opaque plastic	-	4					
30	Rubber sheeting, double-coated, (mackintosh)	-	2/ Table					

S.No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
31	Eye shields	-	1					
32	Instrument Clips	-						
33	Clipboards	-	2					
34	Battery-operated wall clock, with hands showing time in seconds, minutes, and hours	-	1/Theatre					
35	Pillow (for hypo tension)	-	1					
36	Mercury sphygmomanometer with cuff on stand	IS : 3390 - 1988	1/table					
37	Stethoscopes, binaural (bell and diaphragm)	IS: 3391-1965	1					
38	Fetal stethoscope	IS : 6565 - 1972	1					
39	Tape measure	-	1					
40	Clinical thermometers: oral	Part II IS : 3055 - 1988	1					
41	Rectal Thermometer	IS : 3055 - 1994 Part I.	1					
42	Torch, battery-operated	IS : 2083 - 1991	2 large					
43	Clothes-pegs	-	1					
	DISPOSABLES							
44	Self-retaining balloon urinary catheters (disposable), sizes 8,10,12, and 14 ch. (Folley's)	IS: 7523-1974	should be available					
45	Scalpel blades, No. 11, 22	IS : 3319 - 95	should be available					
46	Urethral catheters, sizes 8,10,12,14 and 16 ch.	-	should be available					
47	Urinary bags (disposable)	-	1					

S.No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
48	Surgeon's latex gloves, sizes 6,6 5,7,7 5,8 (disposable is preferable)	IS 4148 - 1989	should be available					
49	Nasogastric tubes (Levine), 12 ch. (disposable)	-	1					
50	Spinal needles	IS : 7350 - 1974						
51	Infant feeding tube Infant-size, 5-6 ch., 38 cm long (disposable)	-	1/case desirable					
52	Intracath Disposable (Webster Luer)	IS : 12655 - Part 4 - 1988						
53	Scalp-vein infusion sets disposable	-						
54	Face masks and caps (should be adequate)	-	1 : 3					
55	Gauze bandages (should be adequate)	-	1 : 3					
56	Absorbent gauze for dressings, Swabs, abdominal packs, petrolatum gauze)	-						
57	Absorbent Gauze (for dressings, swabs, abdominal pads, packs, petrolatum gauze etc.,)	-						
58	Absorbent cotton wool	-						
	LINEN							
59	Gowns (Should be adequate)	-	1:3					
60	Drapers (should be adequate)	-	1:3					
	CONSUMABLES							
61	Linen tape	-						
62	Umbilical tape	-						
63	Indelible pencils (mark the uterine fundus in accidental haemorrhage etc.)	-						

S.No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
64	Surgical adhesive tape	-						
65	Double edged safety razor blades	-						
66	Chromic catgut and (3/0,2/0)	-	should be available					
67	Plain catgut, 0, with and without needles (sub cutaneous)	-	should be available					
68	Nylon and silk with and without needles 0, No.1, Barbers thread No.20	-	should be available					
Note & Comments: Panel suggested all the hospitals should have Barbers thread as it is cheaper and is also desirable to have Nylon, Silk thread, Sutu pack, Prolin, Mono Filament.								
	SPECIFIC INSTRUMENTS FOR CAESAREAN SECTION							
69	B P Handle	IS : 7980 - 1976	2					
70	Scissors (Straight-1, Curved - 1)	IS :9146 - 1979	2					
71	Needle holders	IS : 12841-1989 (Part I,ii,IIi & IV Heaneys pattern)	2					
72	Artery forceps 6" (Straight- 6, Curved -6)	IS : 3645 - 1992 (Spencer wells pattern) IS : 8040 - 1992 (Kocher's pattern) IS : 3644 - 1992 (Halsted's mosquito)	12					
73	Thumb forceps toothed	-	1					

S.No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar'S	5 Caesar'S	8 Caesar'S
				2 sets	6 sets	8 sets	10 sets	16 sets
74	Thumb forceps Non-toothed	-	1					
75	Doyen's bladder retractor	-	1					
76	Simpson's Speculum	IS : 6112 - 1971	1 pair					
77	Babcocks	IS : 8584 - 1992	2					
78	Sponge holders	IS : 7735 - 1992	3					
79	Towel clips (Large-6, small -6)	-	12					
80	Suction tube (Poole's pattern)	IS : 8586 - 1977	1					
81	Green armytage	IS : 7964 - 1992	4					
82	Allis forceps	IS : 7388 - 1992	6					
83	Needles (Skin -2, Rectus Sheath- 2 , Peritoneum- 2 (RB), Uterus -2 (RB)	IS:9165-Part-1 -1992	8					
84	Catgut 1/0,2/0 ch.	-						
85	Kidney Trays	IS:3992-1980	2					
86	Small Bowls	IS:3994-1993	2 (1-Savlon 1-Spirit)					
87	I/V Stand	IS:5880-1970						
88	Basin Stands	IS: 4267-1967	2 (1-Nurse 1-Surgery)					
89	Buckets with Sodium Hypo Chloride solution or Bleaching powder solution	-	1:1 Operation Table					

CONDUCTING SINGLE CAESAREAN SECTION
EQUIPMENT NEEDED

ANESTHESIA EQUIPMENT (For Caesarean Section)

S. No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
1	Anaesthetic vaporizers, for ether, halothane	-	1 for OT					
2	Anaesthetic face masks large adult size (2 of each size total 14)	IS: 6190 - 1971	1 /Pt					
3	Ambubag (Anesthetic breathing bags)	IS : 5602 - 1970	1					
4	Boyel's apparatus	-	1/ OT	OPT	OPT	OPT	N	N
5	Sphygmomanometer	IS : 3390 - 1988	1/ Pt					
6	Pulse Oxymeter for measuring SPO2 & PP	-	1/ Pt					
7	POET (Pulse Oxymeter and Endtidal Carbondioxide monitor)	-		OPT	OPT	OPT	OPT	N
8	E C G Monitor with Defibrillation Unit	IS : 9286 - Part 1&2 - 1988		OPT	OPT	OPT	OPT	N
9	Central venous pressure monitoring unit	-		OPT	OPT	OPT	OPT	N
10	Catheter mounts (sometimes also called endotracheal tube connectors) ,antistatic rubber	-						
11	Endotracheal tubes, sizes 6, 6.5,7, 7.5 cuffed (Rubber) with amendment No.1.	IS : 6581 :1972						
12	Endotracheal tube connectors , 15 mm plastic (can be connected directly to the breathing valve)	IS: 4154: 1967						
13	Epidural needles :No: 16	IS : 11043 - 1984		OPT	OPT	OPT	OPT	OPT
14	Epidural catheters	-		OPT	OPT	OPT	OPT	OPT

S. No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar'S
				2 sets	6 sets	8 sets	10 sets	16 sets
15	Intravenous infusion sets	IS : 12655 - part 4 - 1988						
16	Intracaths No: 18	IS : 12655 - part 4 - 1988						
17	Laryngeal mask airways (Anesthetic airways)	IS: 3392:1965		OPT	OPT	OPT	OPT	OPT
18	Laryngoscopes (2 handles + 3 pairs of blades or 4 plastic laryngoscopes (2 adult + 1 Paediatric) Functional	IS : 4113: Part I & II : 1986	3					
19	Magill's intubating forceps (in an emergency ovum forcep can be used)	IS: 8312: 1977	1					
20	Needles and cannulas for intravenous use, including paediatric sizes	-	1					
21	Oxygen supply by poly mask	IS : 6190 - 1971						
22	Oropharyngeal airway, sizes 00 to 3.5 one inch size (2 of each size total 12)	IS : 3392 - 1965						
23	Spare bulbs for laryngoscopes	IS : 4113 part-1& 2 - 1986	3					
24	Spinal needles range sizes 22 gauge to 24 gauge	IS : 7350 - 1974						
25	Urethral bougies, for use as intubating stylets	-	1					
26	Gauze swabs	-						
27	Antiseptic solution (Formalin/Savlon/Cydex/ Concentrated dettol./Formaline vaporizers)	-						
28	Sterile drapes	-						
29	Sterile gloves, 2	IS : 4148 - 1989						
30	Suction apparatus Mother (30 pounds negative pressure)	IS : 4533 - 1995						

S. No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
31	Sodalime absorber Boyel's- Sodalime canisters for use with gas anesthetic apparatus	IS : 5622:1970						
Note & Comments: Sodalime absorber is a must. Panel felt Bains circuit could be desirable								
32	Xylocaine Jelly	-						
33	Spirit	-						
34	Cotton Swabs	-						
	DRUGS & FORMULARY	**DRUG CODE**						
Source: APVVP Approved drug list & Hospital formulary. Andhra pradesh Commissionerate of Medical Services (Vaidya Vidhana Parishad) Hyderabad- 500195 Abbreviations used SVP = Small Volume Parental LVP = Large Volume Parentral , IV Intravenous, Inj., = Injection								
	Anaesthetic Drugs							
35	Atropine Sulphate 0.5 mg/ml, Inj 1 ml (Anticholinergic, Anticholinesterase , Antidote)	146 SVP	3-4 amp/ pt					
36	Diazepam, 5mg/ml , Inj 2ml (Tranquilizer)	137 SVP	2 amp/ pt					
37	Ketamine	-	1 amp of 100 mg					
38	Pavalon	-	2-3 amp / pt					
39	Pentothal vial	-	1 vial / pt					
40	Scoline	-	1 amp/ 1 vial (10 ml)					
41	Prostigmine	-	5 amp					

S. No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
42	5% Xylocaine (spinal Anaesthetic))	-						
43	0.5 % Bupivicaine (heavy) (spinal Anaesthetic)	-						
44	Vecromine (muscle relaxant)	-						
45	2% Xyloclane (Local Anaesthetic)	-						
46	Morphine 10 mg/ml, Inj., 1 ml Narcotic Analgesic)	-						
	Emergency Drugs							
47	Atropine Sulphate, 0.5 mg/ml, Inj., 1ml (Anticholinergic, Anticholinesterase, Antidote)	146 SVP	5/ Patient					
48	Adrenaline Tartarate, Inj., 1ml, Adrenergic, Bronchodilator, Cardiac Stimulant.	231 SVP						
49	Dopamine	-						
50	Digoxine (Cardiotonic Anti arrhythmic)	-						
51	Decadron vials	-						
52	Etcorlin (Hydrocortisone)	-	2 Vials					
53	Fortwin	-						
54	Calcium Gluconate/ Chloride , 10%, W/V Inj. 10 ml (Calcium Replenisher Mineral)	125 SVP	2 amp					

S. No	Equipment	For single Caesarean Section		Bed Strength (Number of equipment needed)				
		ISI STANDARD (Bureau of Indian Standards)	Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				1 Caesarean	3 Caesar's	4 Caesar's	5 Caesar's	8 Caesar's
				2 sets	6 sets	8 sets	10 sets	16 sets
55	Sodium bicarbonate, 7.5 % W/V ,IV, Inj., 10 ml (Electrolyte Replenisher Systemic Alkaliser)	120 LVP	5 amp					
56	Morphine10mg/ml, Inj. 1ml. (Narcotic Analgesic)	138 LVP	2 amp					
57	Voveran	-						
58	Frusamide, 10 mg/mlInj., 2 ml (Diuretic)	143 SVP	5 amp					
59	Aminophyline, 2.5% W/V OR 2.5 W//V Inj. 10 ml & 2 ml (Broncho Dilator)	126/127 SVP						
60	Deriphyline	-						
	Drugs For Uterine Contraction							
61	Methergin 0.2 mg/ml, Inj. 1ml (Uterine Stimulant)	148 SVP	5 amp					
62	Oxytocin ,2 units/ml ,Inj., 2 units/ml (Oxytocic)	149 SVP	5 amp					
63	Prostidin	-	2 amp					

CONDUCTING SINGLE MEDICAL TERMINATION OF PREGNANCY
EQUIPMENT NEEDED

Minimum Equipment Needed For Conducting Medical Termination Of Pregnancy

Termination of pregnancy can be performed in a number of different ways. The duration of pregnancy is of the utmost important Termination under twelve weeks from the first day of the last menstrual period is surgically a very different operation from that in the second trimester It is useful to divide women undergoing terminations into two groups: 1)a low risk group which includes healthy women (upto 12 weeks) and 2) a high risk group which includes all later termination's and those classed as therapeutic abortions.

Few MTP Procedures in Low risk group include :

1. Dilatation and Curettage
2. Vacuum aspiration -(VA) Suction evacuation.

Few MTP Procedures in High risk groups include:

2. Prostaglandins.
4. Ethacridine lactate.

Minimum Equipment

Equipment for Performing Dilatation and Curettage:

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
			Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 MTP's	3 MTP's	3 MTP's	4 MTP's	5 MTP's
				4 Sets	6 Sets	6 Sets	8 Sets	10 Sets
1	Kidney tray	IS : 3992 - 1980	1					
2	MTP table (Maneuverable)	IS : 6083 - 1971	1					
3	Sim's Speculum (large)	IS : 6112 - 1971	1					
4	Sponge forceps	IS : 7735 - 1992	2 pairs					
5	Uterine sound	IS : 5829 - 1982	1					
6	Uterine dilators (Hegar's)	-	1 set					
7	Uterine curette (blunted, sharp edged)	IS : 6205 - 1971	2					
8	Vaginal speculum (Sims, small, medium)	IS : 6112 - 1971	2					
9	Volsellum forceps	IS : 6114 - 1991	2					

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
			Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 MTP's	3 MTP's	3 MTP's	4 MTP's	5 MTP's
				4 Sets	6 Sets	6 Sets	8 Sets	10 Sets
10	Ovum forceps (small and medium)-2 Straight -1, Curved-1.-2	IS 6578 - 1992	4					
	DRUGS AND FORMULARY	**DRUG CODE**						
Source:APVVP Approved Drug list & Hospital formulary. Andhra Pradesh Commissionerate of Medical Services (Vaidya Vidhana Parishad) Hyderabad- 5000195. Abbreviations used SVP= Small Volume Parentral , LVP= Large Volume Parentral, IV= Intravenous, Inj., = Injection.								
	Emergency Drugs							
11	Adrenaline Tratarate, Inj., 1ml, (Adrenergic, Bronchodilator, Cardiac Stimulant)	231 SVP	5/patient					
12	Atropine Sulphate, 0.5 mg/ml, Inj., 1ml (Anticholinergic, Anticholinesterase, Antidote)	146 SVP						
13	Dopamine	-						
14	Digoxine (Cardiotonic , Antiarrhythmic)	-						
15	Decadron vials	-						
16	Etcorlin (Hydrocortisone)	-	2 Vials					
17	Fortwin	-						
18	Calcium Gluconate/Chloride , 10 %, W/V Inj., 10ml (Calcium Replenisher Mineral)	125 SVP	2 amp					
19	Sodabicarb 7.5 % W/V , IV, INJ., 10ml (Electrolyte Replenisher Systemic Alkaliser)	120 LVP	5 amp					
20	Morphine, 10 mg/ ml, Inj., 1ml (Narcotic Analgesic)	138 SVP	2 amp					
21	Voveran	-						
22	Frusamide 10mg, /ml, Inj.,2ml (Diuretic)	143 SVP	5 amp					

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
			Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 MTP's	3 MTP's	3 MTP's	4 MTP's	5 MTP's
				4 Sets	6 Sets	6 Sets	8 Sets	10 Sets
23	Aminophyline, 2.5 % W/V, Inj., 10 ml (Bronchodilator)	126 SVP						
24	Deriphylline	-						
	Drugs For Uterine Contraction							
25	i) Oxytocin, 2 units/ml, Inj., (Oxytocic)	149 SVP	5 amp					
26	ii) Methergine, 0.2 mg/ml, Inj., 1ml (Uterine Stimulant)	148 SVP	5 amp					
27	iii) Prostidin	-	2 amp					
28	Sterile Water for Injection, Inj., 5 ml.	65 SVP						
29	Antiseptic solution	-						
	LINEN							
30	Sterile Drapes	-	1:3					
	DISPOSABLES							
31	Gauze swabs (Based on No. of procedures)	-						
32	Sterile glove	IS : 4148 - 1989 (Rubber)	2 pairs					
33	Urinary Catheters Folley's Rubber all sizes-	IS : 11497 - 1985 IS : 7523 - 1974 IS : 5680 - 1969	1					
34	Vaginal pads	-	2					

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
			Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 MTP's	3 MTP's	3 MTP's	4 MTP's	5 MTP's
				4 Sets	6 Sets	6 Sets	8 Sets	10 Sets
35	Syringes 2,5,10 c.c	IS 3236 - 1992(Syringe) IS : 3317 - 1983(Needle) IS : 10258 - 1995(Disposable) IS : 10654 - 1991(Disposable) IS : 11400 - 85(Reuse)	3					
Note: For high risk MTPS, Hysterotomies instruments are like for Caesarean Section and more IV fluids are necessary.								

CONDUCTING SINGLE MEDICAL TERMINATION OF PREGNANCY
EQUIPMENT NEEDED
LIST OF EQUIPMENT FOR VACUUM EVACUATION / ASPIRATION

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
				1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 MTP's	3 MTP's	3 MTP's	4 MTP's	5 MTP's
			Number	4 Sets	6 Sets	6 Sets	8 Sets	10 Sets
1	Suction apparatus	IS:4533- 1995	1					
2	Hegar's dilators/Mathew's Duncan dilators	IS:6584-1972	1					
3	Curette	-	1					
4	Sponge holder	IS:7735-1992	2					
5	Operation Table	IS:6083-1971	1					
6	Kidney Tray	IS:3992-1980	1					
7	Sim's speculum	IS:6112-1971	1					
8	Suction Cannulas	-						
	DRUGS FORMULARY							
9	Normal saline bottles	-	2 Bottles					
	Emergency Drugs							
10	Adrenaline Tratarate Inj. 1ml (Adrenergic, Bronchodilator, Cardiac Stimulant)	231 SVP	5/Patient					
11	Atropine Sulphate, 0.5 mg/ml, Inj., 1ml (Anticholinergic, Anticholinesterase, Antidote)	146 SVP						
12	Dopamine	-						
13	Digoxine (Cardiotonic , Antiarrhythmic)	-						
14	Decadron vials	-						
15	Etcorlin (Hydrocortisone)	-	2 Vials					

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
				1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 MTP's	3 MTP's	3 MTP's	4 MTP's	5 MTP's
			Number	4 Sets	6 Sets	6 Sets	8 Sets	10 Sets
16	Fortwin	-						
17	Calcium Gluconate/Chloride , 10 %, W/V Inj., 10ml (Calcium Replenisher Mineral)	125 SVP	2 amp					
18	Sodabicarb 7.5 % W/V , IV, INJ., 10ml (Electrolyte Replenisher Systemic Alkaliser)	120 LVP	5 amp					
19	Morphine, 10 mg/ ml, Inj., 1ml (Narcotic Analgesic)	138 SVP	2 amp					
20	Voveran	-						
21	Frusamide 10mg, /ml, Inj.,2ml (Diuretic)	143 SVP	5 amp					
22	Aminophyline, 2.5 % W/V, Inj., 10 ml (Bronchodilator)	126 SVP						
23	Deriphylline	-						
	Drugs For Uterine Contraction		5 amp					
24	i) Oxytocin, 2 units/ml, Inj., (Oxytocic)	149 SVP	5 amp					
25	ii) Methergine, 0.2 mg/ml, Inj., 1ml (Uterine Stimulant)	148 SVP	5 amp					
26	iii) Prostidin	-						
27	Sterile Water for Injection, Inj., 5 ml.	65 SVP						
28	Anti septic solution	-						

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
				1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 MTP's	3 MTP's	3 MTP's	4 MTP's	5 MTP's
			Number	4 Sets	6 Sets	6 Sets	8 Sets	10 Sets
	DISPOSABLES							
29	Disposable Syringes & Needles	IS:3236-1992(Syringe) IS:3317-1983(Needle) IS:10258-1995 (Disposable) IS:10654-1991 (Disposable) IS:11400-1985 (Reuse)	2					
30	Glove	IS:4148-1989	1 pair					
31	Cotton Swabs	-	4					

CONDUCTING SINGLE MEDICAL TERMINATION OF PREGNANCY

EQUIPMENT NEEDED

TUBECTOMY EQUIPMENT

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
				1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
			Number	2 Sets	6 Sets	10 Sets	15 Sets	20 Sets
1	Sponge forceps,	IS: 7735-1992	1 pair					
2	Scalpel handle with blade,	IS: 3319-1995	2					
3	Small, curved artery forceps,	IS: 3644-1992	4					
4	Small straight artery forceps	IS: 3644-1992	2					
5	Dissecting scissors,	IS: 9146 - 1979	1					
6	Stitch scissors, straight	IS: 9146-1979	1					
7	Needle holder	IS: 12841-1989 Part-1, 2, 3 &4.	1					
8	Needles- skin, cutting, curved, round body	IS: 9165-1992. Part - 2						
9	Dissecting forceps, non toothed	IS: 3642-1990	1					
10	Dissecting forceps, toothed	IS: 3643-1992	1					
11	Retractors (Langenbeck), narrow	IS: 8855-1978	1					
12	Tissue forceps (Allis)	IS. 7388-1992	4					
13	Kidney dishes	IS: 3992-1980	2					
	CONSUMABLES							
14	Sutures, 0 and 2/0 thread, ties and with needles per skin	-						
15	Sutures, 1/0 and 2/0 chromic catgut ties and with needles	-	2					
16	Suture, No. 1 nylon ties and with needles	-	1					
17	Linen tape, 1 piece 20-30 cm long	-	1					
	DISPOSABLES							
18	Sterile gloves	IS: 4148-1989	2 pairs					

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
				1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
			Number	2 Sets	6 Sets	10 Sets	15 Sets	20 Sets
19	Gauze Swabs	-	6					
20	Cotton Swabs	-	6					
	DRUGS AND FORMULARY							
	Emergency Drugs							
21	Adrenaline Tratarate, Inj., 1ml, (Adrenergic, Bronchodilator, Cardiac Stimulant)	231 SVP	5/Patient					
22	Atropine Sulphate, 0.5 mg/ml, Inj., 1ml (Anticholinergic, Anticholinesterase, Antidote)	146 SVP						
23	Dopamine	-						
24	Digoxine (Cardiotonic , Antiarrhythmic)	-						
25	Decadron vials	-						
26	Etcorlin (Hydrocortisone)	-	2 Vials					
27	Fortwin	-						
28	Calcium Gluconate/Chloride , 10 %, W/V Inj , 10ml (Calcium Replenisher Mineral)	125 SVP	2 amp					
29	Sodabicarb 7.5 % W/V , IV, INJ., 10ml (Electrolyte Replenisher Systemic Alkaliser)	120 LVP	5 amp					
30	Morphine, 10 mg/ ml, Inj , 1ml (Narcotic Analgesic)	138 SVP	2 amp					
31	Voveran	-						
32	Frusamide 10mg, /ml, Inj.,2ml (Diuretic)	143 SVP	5 amp					
33	Aminophyline, 2.5 % W/V, Inj., 10 ml (Bronchodilator)	126 SVP						
34	Deriphylline	-						

S.N	Equipment	ISI Number	For single MTP	Bed Strength (Number of equipment needed)				
				1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
			Number	2 Sets	6 Sets	10 Sets	15 Sets	20 Sets
	Drugs For Uterine Contraction		5 amp					
35	i) Oxytocin, 2 units/ml, Inj., (Oxytocic)	149 SVP	5 amp					
36	ii) Methergine, 0.2 mg/ml, Inj., 1ml (Uterine Stimulant)	148 SVP	5 amp					
37	iii) Prostidin	-						
38	Sterile Water for Injection, Inj., 5 ml.	65 SVP						
39	Antiseptic solution	-						
	LINEN							
40	Drapes	-	3					

COMMENTS:

EXAMINATION OF FEW GYNAECOLOGICAL CONDITIONS
EQUIPMENT NEEDED
Common Equipment for Gynaecological Examinations

S.No	Equipment	ISI : NUMBER	For Common Gynae examination	Bed Strength (Number of equipment needed)				
			Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 sets	6 sets	10 sets	15 sets	15 sets
1	Anterior vaginal wall retractors	IS: 5849-1970	2					
2	Ayer's spatula	-	1					
3	Cervical Punch Biopsy Forceps	-	1					
4	Colposcope	-	1	NN	NN	NN	OPT	N
Note & Comments: Colposcope could be taken as optional . As it is preferably used in tertiary care hospitals and with proper experience and training in using it								
5	Culture swabs	-						
6	Cusco's speculum Assorted sizes	IS: 5906-1970	1					
7	Examination table	IS: 4787-1968	1					
8	Kidney Basin	IS: 3992-1980	2					
9	Optimal Microscopes	-	1					
Note & Comments: Optimal microscope can be used for hanging drop technique.								
10	Sim's speculum Double ended	IS: 6112-1971	4					
11	Sponge holding forceps	IS: 7735-1992	6					
12	Uterine sound	IS: 5829-1982	4					
13	Volsellum	IS: 6114-1991	4					
14	Torch	IS: 2083-1991	1					
15	Slides for smear	-	2 Dozen					
16	Cover slips	-	2 Dozen					
17	Cheatle forceps with container	-	1					

STANDARDS IN REPRODUCTIVE HEALTH

PHYSICAL FACILITIES

S.No	Equipment	ISI : NUMBER	For Common Gynae examination	Bed Strength (Number of equipment needed)				
			Number	1-5 Beds	6-15 Beds	16-30 Beds	31-50 Beds	51-100 Beds
				2 sets	6 sets	10 sets	15 sets	15 sets
18	Fixative Jar (Hair spray)	-	1					
19	Bins	-	1					
20	Trays (Stainless Steel)	-	1					
21	Waste bucket for used glove and other instruments	-	2					
22	Shadowless lamp / Angle poise lamp	-	1					
23	Kryo Cautery set with Nitrous Oxide cylinder	-		NN	NN	NN	OPT	NN
	DRUGS AND FORMULARY							
24	Antiseptic Cream And Lotion,Jar	IS: 3997-1982						
25	Aqueous solution iodine and potassium iodine	-						
26	Formalin	-						
27	Water based Jelly	-						
	DISPOSABLES							
28	Glove (Rubber)	IS: 4148-1989						
29	Sterile cotton swabs	-						
30	Sterile pads	-						
31	Sterile small bottles	-						
32	Sterile bottles to collect culture swabs	-						
33	Instrument sterilizer	IS: 5022-1989						
	GENERAL							
34	Stationary	-						
35	Glass marking/ indelible pencils	-	1					
36	Screen (Bed side)	-	1					

CONDUCTING SINGLE INSTITUTIONAL NORMAL DELIVERY

PHYSICAL FACILITIES NEEDED FOR CONDUCTING NORMAL LABOUR

Note : N= Needed, NN = Not Needed, OPT = Optional, Sqft = Square Feet

S.N	Facility	1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
1	New born room	NN	-	-	NN	-	-	NN	-	-	N			N		
Note: Baby resuscitation area can be in Labour room (delivery Room) in hospitals with less than 30 beds. Neonatal intensive care unit is a must for more than 51 bedded hospital.																
2	Changing room or Anteroom with Handwashing facility & Toilet	NN	-	-	NN	-	-	N	1	150 sqft	N	1	150 Sqft	N	1	150 Sqft
3	Sluice room or Dirty area or Washing area	N		50 Sqft	N		50 Sqft	N		50 Sqft	N		50 Sqft	N		50 Sqft
4	Labour room	N	1	100 Sqft	N	1	100 Sqft	N	1	100 Sqft	N	2	200 Sqft	N	2	200 Sqft
5	Lavatory for patients (WC- 1, Bath room - 1 together)	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft	N	2	100 sqft	N	3	150 sqft
Note: If there is only one latrine in 1-5 bedded hospital then it should be near the labour room.																
6	I st stage room/ Observatory room / Post partum Room	NN	-	-	N	1	100 Sqft	N	1	100 Sqft	N	1	100 Sqft	N	1	100 Sqft
Note: Though separate room is not needed for less than 5 bedded hospital a separate partition should be arranged in the ward for the above mention purpose																
7	Nursing station	NN	-	-	NN	-	-	N	1	100 Sqft	N	1	100 Sqft	N	1	100 Sqft
Note: Nursing station should have a rack for sterile supplies , space should be provided for writing records, should have space to pack all the trays for sterilisation, and there should have space resting for doctors and nurses. No separate nursing station is needed for less than 15 bedded hospital																
8	Store room	NN	-	-	NN	-	-	NN	-	-	N	1	50 Sqft	N	1	50 Sqft
Note: Panel suggested that Store room is not needed for less than 30 bedded hospitals but in the infrastructural facilities it self there should be provision for store room																
9	Waiting space for patient's attendants	NN	-	-	NN	-	-	NN	-	-	N			N		
Note; Panel suggested that no separate room is required for smaller hospitals less than 30 bedded, but a facility should be provided in the basic infrastructural facilities																
10	Laundry (Optional)	OPT			OPT			OPT			OPT			OPT		
Note: Panel members said that it is very difficult to have laundry facility in the hospital many said it is better to give to Dhobies out side for washing																

S.N	Facility	1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
11	Eclampsia room	NN	-	-	NN	-	-	N	1	100 Sqft	N	1	100 Sqft	N	1	100 Sqft
Note Eclampsia room is not needed for smaller hospitals but a separate space should be provided for atleast one bed by a partition if needed																
12	Septic labour room	NN	-	-	NN	-	-	NN	-	-	N	-	-	N	-	-
Note: For less than 30 bedded hospital, panel members felt that there is no need of septic labour room separately, the same ordinary labour room can be used preferably it should be fumigated or should be washed and formalin vaporised (formalin tablets are placed in a glass bowl till it get vaporised) after septic labour																

COMMENTS:

CONDUCTING SINGLE CAESAREAN SECTION

PHYSICAL FACILITIES NEEDED FOR CONDUCTING CAESAREAN SECTION

Note : N= Needed, NN = Not Needed, OPT = Optional

S.N	Facility	1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
1	Change rooms/ Scrub area	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft	N	1	75 Sqft	N	1	75 Sqft
2	Dirty utility/Sluice room	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft
3	Instrument sterilization (autoclave) room	NN	-	-	NN	-	-	N	1	75 Sqft	N	1	75 Sqft	N	1	75 Sqft
Note: For 1-15 bedded hospital panel felt there is no need of separate room for sterilisation and vertical autoclaves must be used which occupy less space.																
4	Operation theatre	N	1	200 Sqft	N	1	200 Sqft	N	1	200 Sqft	N	1	200 Sqft	N	1	200 Sqft
Note: If there is no theatre facility then that particular hospital can refer to other hospitals.																
5	Recovery room	NN	-	-	NN	-	-	OPT	-	-	OPT	-	-	N	1	50 Sqft
Note: Separate recovery room is not needed for less than 15 bedded hospitals same Antenatal ward OR Mother can be put on observation in the labour room itself.																
6	Safety measures e.g. Insulation	N	-	-	N	-	-	N	-	-	N	-	-	N	-	--
Note: Safety measures include all the measures in preventing flames, smoke, keep theatre safe from spirit burners, Safety of Boyle's apparatus from sparks as it has inflammable gases. Care of diathermy machine for that surgeon's chappal should be antistatic, taking care of inflammable gases like ether, Oxygen cylinders etc. are included in safety measures.																
7	Store Room	NN	-	-	NN	-	-	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft
Note: Separate store room is not needed in smaller hospitals less than 15 bedded but space should be provided in the theatre it self																
8	Theatre pack preparation room	NN	-	-	NN	-	-	NN	-	-	N	1	50 Sqft	N	1	50 Sqft
Note: No separate room is needed for smaller hospitals Ante room to theatre can be used as store room, theatre pack preparation room , doctors sitting room or for writing notes of the surgery.																
9	Waiting room (Attendants)	NN	-	-	N			N			N			N		
Note: Separate room is not needed for less than 15 bedded hospital. Sluice room, Waiting room, can be shared between Labour room and theatre.																

COMMENTS:

CONDUCTING SINGLE MEDICAL TERMINATION OF PREGNANCY

PHYSICAL FACILITIES NEEDED FOR CONDUCTING MTP

Note : N= Needed, NN = Not Needed, OPT = Optional

S.N	Facility	1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
1	Change room / Scrub area	NN	-	-	NN	-	-	N	1	50 Sqft	N	1	75 Sqft	N	1	75 Sqft
2	Dirty utility/Sluice room	NN	-	-	NN	-	-	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft
3	Instrument sterilization (autoclave) room	NN	-	-	NN	-	-	N	1	75 Sqft	N	1	75 Sqft	N	1	75 Sqft
Note: For 1-15 bedded hospital panel felt there is no need of separate room for sterilisation and vertical autoclaves can be used which occupy less space.																
4	Operation theatre	NN	-	-	NN	-	-	N	1	200 Sqft	N	1	200 Sqft	N	1	200 Sqft
Note: In less than 15 bedded hospitals MTP can be done in labour room. If there is no theatre facility then that particular hospital can refer to other hospitals.																
5	Recovery room	NN	-	-	NN	-	-	OPT	-	-	OPT	-	-	N	1	50 Sqft
Note: Separate recovery room is not needed for less than 15 bedded hospitals / Mother can be put on observation in the labour room itself or can be shifted to Antenatal ward.																
6	Safety measures e.g. Insulation	N	-	-	N	-	-	N	-	-	N	-	-	N	-	--
Note: Safety measures include all the measures in preventing flames, smoke, keep theatre safe from spirit burners, safety of Boyle's apparatus from sparks as it has inflammable gases. While using diathermy machine, surgeon's should wear antistatic chappal, care should be taken of inflammable gases like ether. Oxygen cylinders etc.																
7	Store Room	NN	-	-	NN	-	-	N	1	50 Sqft	N	1	50 Sqft	N	1	50 Sqft
Note: Separate store room is not needed in smaller hospitals less than 15 bedded but space should be provided in the theatre it self																
8	Theatre pack preparation room	NN	-	-	NN	-	-	NN	-	-	N	1	50 Sqft	N	1	50 Sqft
Note: No separate room is needed for smaller hospitals Ante room to theatre can be used as store room, theatre pack preparation room , doctors sitting room or for writing notes of the surgery.																
9	Waiting room (Attendants)	NN	-	-	N			N			N			N		
Note: Separate room is not needed for less than 15 bedded hospital. Sluice room, Waiting room, can be shared between Labour room and theatre																

COMMENTS:

In smaller hospitals MTP can be done in labour room with proper sterilisation facilities. If a hospital has got an operation theatre then all the caesarean sections and other surgical procedures including MTP can be done.

CONDUCTING COMMON GYNAECOLOGICAL EXAMINATION

PHYSICAL FACILITIES NEEDED FOR CONDUCTING GYNAECOLOGICAL DISEASES

Note : S.No. = Number , N= Needed. NN = Not needed, OPT = Optional

S.L	Facility	1-5 Beds			6-15 Beds			16-30 Beds			31-50 Beds			51-100 Beds		
		N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area	N/NN	No.	Area
1	Examination Room	N			N			N			N			N		
2	Hand washing facility	N			N			N			N			N		
3	Lighting facility	N			N			N			N			N		
4	Waiting room for patients	N			N			N			N			N		

COMMENTS : Depending on the number of Out Patients and number of doctors available the examination rooms have to be increased.

ANNEXURE- I

STANDARDS SETTING PANEL

Chairperson	Dr.P.Hrishikesh. MPH *Director of Health (Rtd.)* Government of Andhra Pradesh *Director ,Shivananda Leprosy Centre,* Hyderabad. Andhra Pradesh *Chairman,* Board of Governors, Institute of Health Systems

Names of Panel Members	**Background**
Technical Members:	
Gynaecologists and Obstetricians :	
1 Dr.P.Balamba. MD., DGO	Professor, Osmania Medical College, Government Maternity Hospital Hyderabad.
2 Dr. N.V.Mangrulkar.MD., DGO	Professor, Osmania Medical College, Government Maternity Hospital Hyderabad.
3 Dr. Kalidas. MD (Anaesthesia)	Senior Anaesthetist in OBG, Government Maternity Hospital, Hyderabad.
4 Dr.Vasundhara. MD,DGO	Obstetrician & Gynaecologist Kamineni Hospitals Hyderabad.
5 Dr.Sai Lakshmi. MD	Asst. Professor Obstetrics & Gynaecology Institute of Chest Diseases Hyderabad.
6 Dr.Usha. MBBS	Sr. Obstetrician & Gynaecologist Dr.Ramachandra Reddy's People's Poly Clinic, Nellore.
7 Dr.Uma Jaiswal. MD	Obstetrician & Gynaecologist St.Theresa's Hospital Hyderabad.
8 Dr.Elisita. MD	Obstetrician & Gynaecologist St.Ann's Hospital Hyderabad.
Nursing Personnel:	
9 Mrs. Rafath Razia. MSc. (Nursing)	Assistant Commissioner Andhra Pradesh Vaidya Vidhan Parishad Hyderabad.

10 Mrs. Grace Benjamin, GNM	Nursing Superintendent YASHODA hospitals Hyderabad
11 Mrs. Shantha, GNM	Theatre Incharge ESRA Hospital, Hyderabad

Other Technical Members:

12 Dr Lily MD (General Medicine)	Physician, St. Theresa's hospital Hyderabad.
13 Mr. K Satyanarayana, M.E (Biomedical Engineer)	Reader, College of Engineering Department of Bio Medical Engineering Osmania university Hyderabad.
14 Mr. K. Raghunandan, B.Arch (Architect)	Assistant State Architect Engineer in Chief R & B and Administration Hyderabad
15 Mr. H.I. Upendar	Joint Director Bureau of Indian Standards Hyderabad.

Women's Group Activists / Health Activists/Activist Researchers / ActivistDoctors/ Health Policy Researchers

16 Dr.G. Vijaya Kumar, MBBS (Health Activist)	Senior Doctor, People's Poly Clinic, Nellore . Co-ordinator, Health Sub Committee, Jana Vignana Vedika, Nellore.
17 Dr. Sonia S.Gupta, Ph.D., (Women's Group Activist)	Lecturer, Department of Foreign languages, Central Institute of English and Foreign Languages Hyderabad.
18 Dr.Mani Kaliyath, MD (Health Activist)	Co-ordinator, Dept. of Community Health, Catholic Health Association of India, Secunderabad.
19 Dr. Sheela Prasad , Ph.D., (Health Policy Researcher & Womens Group Activist)	Reader, Centre for Regional Studies, Central University, Hyderabad
20 Dr. Vijaya Lakshmi. BHMS., (Women's Group Activist)	Asmita Resource Centre for Women, Secunderabad .

Participants from the Institute of Health Systems

21	Dr. Prasanta Mahapatra, M B B S. IAS	Research Fellow, Harvard Center for Population and Development Studies. Member, Board of Governors, IHS Managing Director, A.P.T.S Ltd, Hyderabad
22	Dr P.Satyanarayana. MHA, FIAMS (Hospital Administrator)	Superintent (Rtd.) Nizams Institute of Medical Sciences Member, Board of Governors, IHS Chief Executive Officer Mediciti Hospitals Hyderabad.
23	Mrs. Lipika Nanda. M.A ,C.A.S,MS.,	Member, Board of Governors Institute of Health systems Lecturer, Dept. of Hospital Administration Nizam's Institute of Medical Sciences, Hyderabad.
24	Dr.M.Prakasamma.Ph.D.,	Member, Board of Governors, Institute of Health Systems Honorary Secretary Academy for Nursing Studies Hyderabad
25	Dr. P. Venkateshwara Rao, MHA., (Hospital Administrator)	Medical Superintendent, NIMS Nizam's Institute of Medical Sciences. Hyderabad.
26	Dr. Alex George, Ph.D.,	Observer, Director, Institute of Health Systems Adarshnagar, Hyderabad
27	Mrs. S. Srilatha	Rapporteur Research Officer Institute of Health Systems, Adarshnagar, Hyderabad

List Of Sub Committee Members

Name	Background
Dr. N.C.S Reddy. MD.,	Former Commissioner, Andhra Pradesh Vaidya Vidhana Parishad Member, Board of Governors Institute of Health Systems Presently, Private Practitioner, Nellore.
Dr. J. Sesha Reddy, MBBS.,	Dr. Rama Chandra Reddy's People's Poly Clinic, Nellore.
Dr M V Ramanaiah, MBBS.,	Senior Physician, Dr Rama Chandra Reddy's People's Poly Clinic, Nellore.
Dr.Sudhakar Reddy, MBBS.,	Praja Vaidya Sala, Ongole.
Dr. V.R Muralidharan , Ph.D., (Health Policy Researcher)	Faculty , Indian Institute of Technology, Madras.
Dr. P. Yasodhara. MD.,	Brain Centre, Nellore.
Dr. J. Usha Rani. MBBS.,	Senior Obstetrician & Gynaecologist, Dr.Rama Chandra Reddy's People's Poly clinic, Nellore.
Dr. E. Ramamma, MBBS.,	Dr.Rama Chandra Reddy's People's Poly clinic, Nellore.
Dr. J. Mrudula. MD.,DGO.	Kota Reddy Nursing Home, Kandukur, Prakasham. Dist.
Dr. A. Tulasi. MD.,DGO.	Private Practitioner Nellore.
Dr. C.G. Lakshmi Devi. MBBS.,DGO.	K.K.R Hospital, Nellore. Dist.
Dr. Chinna Krishna, MBBS.,	Sridhar Children Hospital, Nellore.
Dr. V. Shiva Kumar Reddy. MS.,	Kota Reddy's Nursing Home, Kandukur, Prakasham. Dist..
Dr. Y. Rama Prasatha Reddy, MBBS.,	K.K.R Hospital. Atmakur,Nellore. Dist.
Dr.K.Aruna, MBBS.,	Private Practitioner, Nellore.
Dr. V.Dorasanamma, MBBS.,	Private Practitioner, Nellore.
Dr.S.Bhaskar, MD.,	Lakshmi Fertility Clinic & Research Centre,Nellore.
Dr.S.Andal,MD.,	Lakshmi Fertility Clinic & Research Centre Nellore.
Dr.Konda Reddy, MBBS.,	Private Practitioner, Nellore.
Dr.P.Chandra Mohan, MBBS.,	Private Practitioner, Nellore.
Dr.S.V.Umadevi, MBBS.,	Private Practitioner, Nellore.