

Chapter VI: Hospital Administration

Audit Objectives:

To assess whether:

- **Compliance with procedures relating to different aspects of hospital administration e.g. working of hospital infection control committee and Bio medical waste management was ensured.**

6.1 General



Hospital Administration is a specialised field which deals with each and every function of a hospital to ensure its smooth functioning for optimal clientele satisfaction.

The working of hospitals as regards creation of infrastructure, patient care practices and management of bio medical waste was studied in the hospitals covered under the Performance Audit and the findings are discussed in the succeeding paragraphs.

6.2 Creation of infrastructure

Delay in procurement of refrigerated centrifuge

In 1997, CH (AF) Bengaluru projected a case for procurement of refrigerated Centrifuge equipment for blood components. In October 2010, the CH (AF) raised a fresh proposal on AFMC Pune for its procurement. However, the equipment had not been purchased as of April 2011. In absence of the centrifuge equipment, the hospital had to procure blood components, single donor platelets and fresh frozen plasmas from trade. The case illustrates mismatch in procurement of equipment relating to handling of blood at CH (AF) for over a decade.

Deficient storage accommodation

The Scales of Accommodation for Defence Services provide for authorisation of storage accommodation for non-expendable medical stores, expendable stores, local purchase & other stores, cool room and cold storage room for the hospitals. The holding of accommodation as per the scales was examined in 24 hospitals. It was noticed that the deficiency in accommodation for cool room ranged from 11 to 100 *per cent*, for cold storage from 10 to 100 *per cent* and for overall medical storage

accommodation from 5 to 100 *per cent*. The hospitals where 100 *per cent* deficiencies exist are as under.

Table- 66: Deficiencies in storage accommodation*

Hospital	Cool room	Cold storage	Normal medical storage accdn
INHS Jeevanthi	✓	✓	
MH Shillong	✓	✓	
178 MH	✓	✓	✓
163 MH	✓	✓	
BH Barrackpore	✓		
MH Jabalpur	✓	✓	
MH Gaya	✓	✓	
MH Jaipur		✓	
404 Field Hospital		✓	
MH Jodhpur	✓		
MH Amritsar	✓	✓	
CH (NC) Udampur	✓	✓	
6 AF Hospital	✓	✓	

*Data compiled from information furnished by hospitals

As the purpose of cool room and cold storage accommodation is to preserve the life and quality of medical stores held, the deficiencies on this count carry the risk of deterioration of medical stores in storage. Evidently adequate attention was not given by AFMS to address these deficiencies over the years. Even when projects for modernization were undertaken, the deficiency was allowed to persist, as evidenced at INHS Ashwini, where the accommodation for medical stores was not included in the scope of the modernization project. A separate work for the same was sanctioned in February 2009 for ₹ 1.93 crore which is yet to be undertaken (March 2011).

DGAFMS and DGMS (Army) stated that no requirement on account of deficiency of storage accommodation was projected to them by hospitals but did not clarify as to why the deficiency was not monitored.

Deficiency of ambulances



Ambulances authorised in the PE of hospitals are in the category of 1 Ton (Ambulance 2 strecher), 2.5 Ton (Ambulance 4 strecher) or car light 250 kg. Based on annual provision review, the requirement for procurement of ambulances is arrived at by the DGOS. The availability of ambulances against authorization as of July 2008 to July 2011 in 111 Army hospitals was as follows:

Table- 67: Deficiencies in ambulances

As on	Ambulance 4 Stretcher			Ambulance 2 Stretcher		
	Unit Entitlement	Held (Fit + Repairable)	Deficiency/ (Percentage)	Unit Entitlement	Held (Fit + Repairable)	Deficiency/ (Percentage)
01.7.2008	2106	1088	1018 (48)	1178	648	530 (45)
01.7.2009	2129	1083	1046 (49)	1239	994	245 (20)
01.7.2010	2256	1001	1255 (56)	1265	1040	225 (18)
01.7.2011	2140	919	1221 (57)	1291	1079	212 (16)

While the deficiency of ambulances 2 stretcher decreased from 45 *per cent* to 16 *per cent*, the deficiency in respect of ambulances 4 stretcher increased from 48 *per cent* to 57 *per cent*. The increase in deficiency was mainly due to tardy pace of procurements and infirmities in JSQR²¹ contained in RFP issued to vendors.

The holding of ambulances against authorisation was further examined in 23 hospitals. It was noticed only nine hospitals held ambulances as authorised, one was holding surplus while 13 hospitals were deficient. The deficiency was the highest at MH Jaipur (50 *per cent*) followed by MH Ambala (46 *per cent*), MH Jabalpur (40 *per cent*), MH Jodhpur (36 *per cent*), MH Gaya (33 *per cent*) and CH SC (29 *per cent*).

As availability of ambulance has a direct bearing on patient care, deficiencies in this regard needs to be redressed on priority.

Functioning of blood banks without valid licence

Human blood is covered under the definition of “Drugs” under section 2(b) of Drugs and Cosmetics Act. Hence it is imperative that blood banks be regulated under the Drugs and Cosmetics Act and licence required for operating a blood bank be obtained. Licencing of all blood banks became mandatory in 1993, based on availability of required infrastructure both in terms of manpower and equipment.

It was noticed that MH Amritsar, MH Jabalpur and MH Ambala operated blood banks in violation of this requirement (August 2011).

MH Jabalpur stated (May 2011) that renewal of licence was in process. MH Ambala said that it had applied for renewal in 2007 before expiry of the licence while MH Amritsar said that it had applied for licence in 2002.

In the absence of licence and its accompanying regulatory requirements, we could not ascertain whether the blood banks were operated according to approved standards.

Failure to raise Corps Blood Supply Units (CBSUs)

Blood being a precious and perishable commodity, its storage for longer period is not a viable proposition. During outbreak of hostilities, collection, storage and

²¹ Joint Services Qualitative Requirement

transportation of fresh blood to forward areas has to be undertaken which require specialised equipment and establishment of cold chains. As Army did not have designated units to cater to the above activities, an Expert Committee on Overall Review and Rationalisation of Indian Army recommended in 1990 raising of Blood Supply Unit (BSU) at the scale of one for each of the Corps formations to fill the existing void. Establishment of three BSUs at three Corps formations was sanctioned by the Government between November 1994 and February 1997 which was subsequently merged with the Corps Field Hospitals.

As per recommendations of an Expert committee the DGMS (Army) proposed in January 2009, and later in September 2010, raising of Blood Supply Platoon for Field Hospitals of ten Corps Headquarters formations. The recommendation has not been accepted as on date and the void continues to exist.

6.3 Hospital Infection Control Committee (HICC)

Recognising the risks associated with hospital acquired infections (HAI), the DGMS (A) circulated guidelines in this regard to Medical Branch of all the Commands in July 2008. The control over risks was to be overseen by a Hospital Infection Control Committee (HICC). The guidelines, inter-alia, stipulated that the HICC consisting of senior functional specialists will meet every quarter and evaluate the surveillance and infection control policies and measures.

The DGMS observed that HICC's though constituted by most Service hospitals had largely remained only on paper. In three out of 24 hospitals, where information was furnished, HICC was non-functional during the period 2008-11 viz. CH WC Chandimandir, BH Barrackpore and MH Deolali. There were significant shortfalls in monitoring by HICC at most hospitals as the required number of meetings had not been conducted as shown below:

Table-68: Number of meetings of HICC*

SI No	Name of Hospital	2008	2009	2010
1	BH Lucknow	2	3	NF Not Functional
2	166 MH	2	2	4
3	MH Ambala	1	1	2
4	CH(NC) Udampur	-		4
5	INHS Ashwini	1	3	4
6	MH Agra	3	4	NF
7	INHS Jeevanthi	1	1	NF
8	MH Alwar	3	3	3
9	MH Shillong	2	2	NF
10	CH SC Pune	-	4	3

**Data compiled from information furnished by hospitals*

Deficient functioning of HICC indicated that infection control policies and measures in the area of HAI had not been accorded due attention by most hospitals.

Recommendation No 13

Deficiencies in existing cold storage accommodation for drugs and holding of ambulances should be remedied within a reasonable time. The working of hospital infection control committee also needs to be strengthened.

The Ministry in response agreed with the recommendation and stated that remedial action would be taken.

6.4 Bio-Medical Waste

Implementation of Bio Medical Waste (BMW) guidelines in Armed Forces Health Care Establishments

The Hospital Waste Management system primarily consists of segregation of biomedical waste at source of generation followed by its collection, handling, storage, transportation, treatment and final disposal.

The Bio-Medical Waste (Management & Handling) Rules 1998 made it incumbent on the part of all Health Care Establishments (HCEs) to adopt Bio-Medical Waste (BMW) management by December 2002. DGAFMS was nominated as “Prescribed Authority” for authorizing and implementing the BMW Act in the Armed Forces Medical Services (AFMS) and the Central Pollution Control Board (CPCB) was mandated by law for monitoring the implementation of the Act.

Guidelines for management and handling of Bio Medical Wastes (BMW) in the armed forces, formulated by DGAFMS, were circulated by the DGMS (Army) to all the Command Hqrs in July 2003 with the request to disseminate it to all Health Care Establishments (HCE) for enforcement. Under these Rules, all HCEs generating BMW are required to apply to the prescribed authority for authorisation. The validity of authorisation for management and handling of BMW under these rules is three years, including an initial trial period of one year. Thereafter an application is required to be made by the HCE for renewal. All such subsequent authorizations are also valid for a period of three years.

Our scrutiny at DGAFMS revealed that of the 280 HCEs in Army 241 (87 *per cent*) did not hold valid authorisation as of March 2011. In the case of Air Force, 99 HCEs out of 162 (61 *per cent*) and, in Navy, 2 HCEs out of 10 (20 *per cent*), had not renewed their authorisation as of March 2011. Initial authorisation of these HCEs had expired long back. As valid authorisation under the Rules is not available to a large number of HCEs, their capacity to handle BMW in accordance with these rules is

suspect. As the renewal of authorisation is a statutory requirement, delay in this regard also carries risk of levy of penalty by the CPCB.

DGAFMS stated that all the HCEs had been instructed to get the authorisation renewed immediately.

Inspection by Central Pollution Control Board

On inspection of the facilities in 45 HCEs during 2004-2010, the CPCB highlighted serious shortcomings in implementation of BMW Act by DGAFMS which were circulated to various units and commands within the AFMS. Some common observations of CPCB were as under:

1. Facilities do not have valid consents under Water (Protection) Act 1974 and Air (Protection) Act 1981.
2. Records were not properly maintained for collection of waste, its movement to incinerator, disposal of incinerated ash, etc.
3. There were major leakages in incinerators in many HCEs and major emissions were being directly discharged in the surrounding environment.
4. There were many serious issues relating to collection and disposal of liquid waste including non provision of effluent treatment plant.
5. Microwave, plastic shredders were not functional and other equipment like Autoclave and incinerators were being run without testing and monitoring.

Despite these serious observations of CPCB, no time bound action plan had been framed by DGAFMS/DGMS to plug the lacunae in BMW management in AFMS.

Non adherence to the guidelines issued by the DGAFMS

Adherence to the guidelines for disposal of bio-medical waste formulated by DGAFMS was studied in 26 hospitals covered under the Performance Audit.

Segregation, generation, collection, storage and final disposal of BMW as per the guidelines were stated to be done by all hospitals. Except for four of these viz. 178 MH, 166 MH, MH Amritsar and MH Deolali no other hospital could furnish the figures of BMW generated and disposed of during the period of audit.

Sixteen out of 26 hospitals had not conducted the meetings of BMW management Committee in 2010-11.

As per the guidelines, hospitals were required to conduct trainings for their Doctors, Nurses, Paramedical staff and waste handlers in the area of BMW management at least twice a year. Our scrutiny revealed that 13 out of 26 hospitals had not conducted the training in 2010-11 while a majority had not maintained details in regard to the trainings conducted such as periodicity of trainings and the number of persons trained.

Whereas incinerators for disposal of hospital waste were held by 22 hospitals, the downtime of the equipment ranged from 5 to 203 days during the period 2008-09 to 2010-11. Downtime was quite substantial in CH WC Chandimandir, BH Delhi Cantt, MH Amritsar and 178 MH.

Effluent treatment plant was not available even in Command, Speciality and Referral hospitals.

Deficiency in critical equipment required for bio-medical waste management



Auto Clave

The guidelines on bio-medical waste issued by the DGAFMS in February 2008 provide holding of the equipment in connection with waste management. The deficiency of equipment was assessed by a board of officers in July 2010 as under:

Table-69: Details of equipment held against authorisation

Equipment	Authorised, as per scales	Held	Deficiency	Percentage of Deficiency	Remarks
Waste Steriliser	38	2	37*	97	*01 for AFMC
Microwave	47	33	15*	32	*01 for AFMC
Plastic Shredder	196	45	152* **	78	*01 for AFMC ** MH Kota and MH Jaipur have 3 shredder each
Auto Clave	120	31	90*	75	*01 for AFMC
Incinerator	52	201	(-)149	(-)287	Surplus holding



Waste Steriliser

It can be seen that the deficiency is 97 per cent as regards waste steriliser, 32 per cent of microwave, 78 per cent of plastic shredder and 75 per cent of auto clave.

The deficiencies against authorization would indicate that the disposal of waste by the hospitals is being made without disinfecting, sterilizing and shredding them.



Incinerator

Recommendation No 14

Urgent steps need to be taken by DGAFMS to ensure adherence to the Bio-Medical Waste (Management & Handling) Rules 1998 by Health Care Establishments. The management of bio-medical waste may be placed on a firm footing by way of regular monitoring, making good the deficiency in holding of critical equipment required for treatment of waste in a reasonable time frame, maintenance of documents reflecting their generation and disposal and setting right the shortfalls in their management, as observed by the CPCB.

The Ministry in their response stated that all observations made by CPCB were sent to the hospitals concerned and corrective action taken was reported to CPCB. Advisories had been issued to the Service Medical Directorates requesting strict adherence to the monitoring and supervision duties specified at each level. Close liaison is maintained to ensure conduct of proper inspection visits by CPCB and their follow-up. Current information was available regarding amount of waste generated, equipment held and date of issue and validity of authorisation. This has enabled close monitoring at the central level.

The Ministry's response is general in nature and it does not address the issue of shortage of bio-medical waste equipment and the steps it proposed to take to reduce their downtime and to make waste management efficient and compliant to the standards prescribed.