

Medical Education Department

3.7 Functioning of Mathura Das Mathur Hospital, Jodhpur

3.7.1 Introduction

Mathura Das Mathur (MDM) Hospital, Jodhpur is the largest hospital in the western region of Rajasthan and is attached to Government Medical College (Dr. SN Medical College) at Jodhpur. There are 18 departments³⁹, including seven Super-Specialty departments⁴⁰ and a separate Geriatric clinic⁴¹ for senior citizens, in MDM hospital. They have inpatient facility of 1,111 beds. The hospital offers referral and tertiary healthcare services⁴² to the patients. The Principal and Controller (P&C) of Dr. SN Medical College, Jodhpur is controller of the hospital and controls the budget of the hospitals. MDM Hospital, Jodhpur is headed by Superintendent, who is responsible for delivery of healthcare services in the hospital.

During the period 2013-17(calendar year), MDM Hospital provided healthcare services to 51.19 lakh patients and incurred revenue expenditure of ₹ 265.81 crore during 2013-18 (financial year). These funds were received from various sources⁴³. Smaller portion of these funds were available for spending on medicines and repair & maintenance of the hospital assets during the period 2013-18 since majority were spent on salary, general establishment and contractual services (71.29 per cent).

With a view to assess the quality of inputs, efficiency and outcomes of the hospital processes, a thematic audit of the delivery of services by MDM Hospital Jodhpur, was conducted (May-September 2018) for the period 2013-18.

Audit Findings

Audit findings related to various aspects of the functioning of MDM Hospital have been discussed below.

3.7.2 Resource Management

Hospital resources include infrastructure, human resources, equipment and consumables and drugs. Audit scrutiny of the resources of MDM Hospital and their management revealed the following:

³⁹ Dentistry; Dermatology, Venereology & Leprosy; Ear, Nose & Throat (ENT); General Medicine; General Surgery; Obstetrics & Gynecology; Ophthalmology; Orthopedics; Pediatrics; Psychiatry and Radio-Therapy.

⁴⁰ Cardiology, Cardiothoracic & Vascular Surgery, Gastroenterology, Nephrology, Neurology, Neurosurgery and Urology.

⁴¹ Under National Programme for the Healthcare of the Elderly (NPHCE).

⁴² Tertiary care is a specialized consultative healthcare provided for inpatients referred from primary and secondary level hospitals, in an institution that has personnel and facilities for advanced laboratory and imaging investigations.

⁴³ State General Budget, MNJY, MNDY (RMSCL), MNDY (MDM).

3.7.2.1 Building Infrastructure

MDM Hospital building comprises of four blocks accommodating 27 OPD units in 18 departments, one Geriatric Clinic, one Trauma Centre and one central laboratory.

The shortage in infrastructure with respect to standards of Medical Council of India (MCI), for providing quality healthcare services in various departments, operation theatres and wards are discussed in the following paragraphs.

(i) **Infrastructure availability to meet increasing patient load:** As per clause B.1.9 of 'Minimum Standard Requirements for the Medical College for 250 Admissions Annually Regulations, 1999' (Regulations), the teaching hospitals are required to have an attached 1,100 bedded facility for providing tertiary healthcare facilities. MDM hospital has 19 departments which have 28 OPD units⁴⁴ and 1,111 beds for patients' care and treatment. Scrutiny of records revealed that there was substantial patient load in the MDM hospital, the details of which are given in **Table 10**.

Table 10

Year	Number of OPD Patients (in lakh)	Number of IPD Patients (in lakh)	Patients load (in lakh)	Percentage increase as compared to 2012	Number of functional OPD units	Availability of beds
2012	7.08	0.30	7.38	-	17	NA
2013	8.70	0.37	9.07	22.90	23	703
2014	9.04	0.40	9.44	27.91	23	759
2015	9.25	0.46	9.71	31.57	25	936
2016	10.48	0.64	11.12	50.68	25	1,001
2017	11.12	0.73	11.85	60.57	28	1,111
Percentage increase in 2017 as compared to 2012	57.06	143.33	60.57			58.03

Source: information provided by MDM hospital, Jodhpur.

It can be seen from the above table that the number of OPD patients and IPD patients increased by 57.06 per cent and 143.33 per cent respectively during 2012-17. However, during this period, the number of beds increased only by 58.03 per cent which was not commensurate with the growth of IPD patients. Despite this, no planning for creation of additional/new units was done by the hospital during 2013-18 to cater for the increasing patient load, though, 10 units⁴⁵ were transferred from other hospitals to MDM Hospital during this period and one Geriatric clinic for senior citizens was established in August 2013.

GoR accepted the facts and stated (February 2019) that many units were transferred from other hospitals and seven super speciality departments and one Geriatric clinic were operationalised. To decrease the patient load from

⁴⁴ A unit is headed by either Professor or Associate Professor and generally have not more than 30 beds.

⁴⁵ Five units (one unit of General Medicine, two units of Obstetrics & Gynaecology, one unit of paediatrics and one unit of Cardiothoracic & Vascular Surgery) in 2013, two units of paediatrics in 2015 and three units (one unit of General Surgery, one unit of Gastroenterology and one unit of Urology) in 2017.

old building, a new OPD block was operationalised in 2017 and six OPD units were transferred to new OPD Block. The construction of first, second and third floors for remaining departments, Central Lab and Teaching Block was still pending.

(ii) *Insufficient infrastructure in Wards*

Norms prescribed by MCI provided that accommodation in a ward shall not exceed 30 patients. Further, the norms for infrastructure requirement for each ward include availability of Clinical Demonstration Room, Examination and Treatment Room, Residential Doctors and Student Duty Room, Nurses Duty Room/Nursing Station and Ward Pantry etc., in each ward.

Audit scrutiny of records and information provided for 33 wards revealed that Clinical demonstration rooms were not provided in 24 wards (72.73 *per cent*), Examination and treatment rooms were not provided in 19 wards (57.58 *per cent*), Resident doctors and Student duty room were not provided in eight wards (24.24 *per cent*) and Ward pantry was not provided in 22 wards (66.67 *per cent*). Further, there was a high bed occupancy ratio in two out of three Pediatric wards. It was also noticed that bed occupancy ratio of these wards was 104 *per cent* in 2016, 113 *per cent* in 2017 and 117 *per cent* in 2018.

Facilities prescribed by MCI for wards are necessary to ensure that quality health services are provided efficiently and effectively. Thus, the delivery of quality health services have been impacted to the extent of shortage of these facilities.

GoR accepted the facts and stated (February 2019) that the old wards did not have prescribed infrastructure. In some wards, treatment room was being used as clinical demonstration room and wherever adequate space was available, Public Works Department had been instructed to construct clinical demonstration and treatment room in wards. It was also stated that to address the high bed occupancy ratio in paediatric wards, one neo natal ward of 20 bedded capacity was constructed and would become operational upon deployment of nursing staff and specialists.

However, the fact remained that a holistic view, of the current and future infrastructure needs, required to be taken in order to ensure continued infrastructure availability as per the prescribed norms.

(iii) *Insufficient infrastructure for Operation Theatres*

Norms prescribed by MCI in 1999 (revised norms w.e.f 03.11.2010) provides for minimum infrastructure for each Operation Theatre (OT) consisting of (i) waiting room for patients, (ii) pre-anesthetic/preparation room (for at least four beds), (iii) post-operative recovery room (for at least 20 beds), (iv) instrument room, (v) nurse room, (vi) washing room for Surgeon and Assistants and (vii) students washing up and dressing room etc.

Five OTs were operating under MDM hospital namely Cath laboratory OT (one table), Ophthalmology OT (four tables), Gynecology OT (three tables),

Main OT (seven tables)⁴⁶ and Cardiothoracic OT (three tables)⁴⁷. Audit scrutiny revealed that:

- Pre-Anesthetic/preparation room was not provided in two (Gynecology and Cardiothoracic) out of five OTs and against the norm of four beds, only three beds were provided in Ophthalmology OT.
- Post-Operative Recovery Room was not provided in Cardiothoracic OT while other four OTs had less number of beds in Post-Operative recovery rooms.
- Soiled Linen Room was not provided in three OTs (Ophthalmology, Gynecology and Main OTs).
- Instrument Room was not provided in two OTs (Ophthalmology and Gynecology OT).
- Nurse Room was not provided in two OTs (Ophthalmology and Main OT).
- Surgeon and Anesthetist Room was not provided in three OTs (Ophthalmology, Main and Cardiothoracic OT).
- Observation gallery required for practical training of students was not provided in four OTs (Ophthalmology, Gynecology, Main OT and Cardiothoracic).

GoR while accepting the facts stated (February 2019) that instructions were being issued to provide sufficient space as well as upgrade infrastructure in Operation Theatres as per MCI norms. It was also stated that presently all the construction activities are being carried out in accordance with the MCI norms.

(iv) Non availability of Oxygen line and connections in wards

As per MCI norms, all the wards in Orthopedic, Surgery and Pediatrics Departments should have wall mounted suction lines along with piped wall mounted central Oxygen lines on all beds and at least five beds in Ophthalmology department should have the same arrangement.

Out of 319 beds in these four departments of Pediatrics, Surgery, Orthopedic and Ophthalmology, oxygen line was provided to only 38 beds (11.91 per cent).

GoR while accepting the fact stated (February 2019) that the tendering for installation of oxygen lines in the wards was under process.

⁴⁶ Includes Neurosurgery, Urology, ENT, Surgery and General Emergency.

⁴⁷ Includes Orthopedic, Dental and Cardiothoracic department.

(v) Insufficient infrastructure for Central Laboratory

As per MCI norms, there shall be well equipped and updated central laboratories preferably along with common collection for all investigations in pathology, microbiology and biochemistry and other specified works. Accordingly, there was a central laboratory for carrying out various investigations in pathology, biochemistry and microbiology. Scrutiny of records and physical verification of central laboratory revealed that there was no separate room for doctors (non-clinical) in microbiology laboratory. As a result, they had to sit with technicians and collected the samples of patients in the same room.

GoR while accepting the facts stated (February 2019) that the proposals for construction of well equipped laboratory building in new OPD block was pending for approval.

3.7.2.2 Human Resources: Shortage of medical specialists/medical staff

The details of sanctioned strength for various medical cadres in the hospital vis-à-vis person-in-position as on 31 March 2018 is given in the **Table 11**.

Table 11

Name of post	Sanctioned Strength	Persons in Position (Regular Staff)	Shortfall (in per cent)	Contractual staff/other staff	Total	Overall shortfall in PIP
Medical Officers	37	18	19 (51.35)	0	18	19
Staff Nurses	941	417	524 (55.69)	283	700	241
Para-medical staff	117	50	67 (57.26)	73	123	(+)6
Total	1,095	485	610 (55.71)	356	841	254

Source: information provided by MDM hospital, Jodhpur.

It can be seen from the table that as of March 2018:

- There was 51.35 per cent shortage (19 out of 37) of Medical Officers (Doctors).
- There was an overall shortage of 25.61 per cent of nursing staff (241 out of 941) including contractual nursing staff. It was also observed that despite shortage of nursing staff, 11 staff nurses were allowed to proceed on deputation and 11 staff nurses were deployed for tasks other than nursing.

Further, though there was an overall excess of 6 specialists⁴⁸ (Professors, Associate Professors and Assistant Professors) as per MCI norms. However, shortage of 1 or 2 specialists in departments of dentistry, obstetrics &

⁴⁸ Specialists include Professors, Associate Professors and Assistant Professors (teaching faculties). Department wise/hospital wise sanctioned strength of specialist was not provided though overall sanctioned strength for all constituent hospitals was available at medical college level. Comparison has been done between requirements of "Specialists" as per MCI norms for 28 units and actual deployment thereof.

gynecology, ophthalmology, radio-therapy, cardiothoracic & vascular surgery and nephrology was also noticed.

GoR accepted (February 2019) that there was shortage of medical officers and staff nurses. To address the acute shortage of staff nurses, 283 nurses were engaged on urgent temporary basis. Further, proposals are under consideration for repatriation of the nursing staff who were on deputation.

3.7.2.3 Equipment Management

As per norms prescribed by MCI, availability and management of Machinery and Equipment in a hospital and optimum utilisation thereof is essential for better delivery of healthcare services

The status of availability and utilisation of machinery & equipment for providing quality healthcare services in various departments and units of the hospital, as compared to standards prescribed by MCI, are discussed in the following paragraphs.

(i) Non-functional equipment in ICUs and OTs

Scrutiny of records of five OTs and six ICUs revealed that 33 to 100 per cent of essential machines and equipment were non-functional in one OT (Cath lab OT) and four ICUs (Pediatric, Surgical, Medical and Trauma), as detailed in **Table 12**.

Table 12

Name of ICU/ OT	Name of Machines/ Equipment	Total available	Functional	Non-functioning (per cent)	Period of non-function as of December 2018 (in months)
Pediatric ICU	Pulse Oximeter	4	1	3 (75)	16
	Baby Warmer	6	0	6 (100)	18
	Defibrillator	2	1	1 (50)	9
	ECG Machine	1	0	1 (100)	30
	Weighing Machine	3	2	1 (33)	16
	B.P. Instrument Mercurial	3	2	1 (33)	16
	Infusion Pump	21	7	14 (67)	16
Surgical ICU	Ventilator	15	8	7 (47)	18-48
Medical ICU	ECG Machine	3	1	2 (67)	9
	Defibrillator	4	2	2 (50)	16
	Ultrasonic Machine	1	0	1 (100)	23
Trauma ICU	Electric Suction Machine	5	2	3 (60)	24-48
	Advance ICU Ventilator	2	0	2 (100)	36-60
Cath lab OT	Fumigation Machine	2	1	1 (50)	23
	Artery Forceps	15	4	11 (73)	107
Total		87	31	56 (64.37)	

Source: Information provided by MDM hospital, Jodhpur.

Further, In-charge of Pediatric ICU also informed (May-July 2018) the Superintendent that various machines in Pediatric ICU were repairable, but no action for repairing these machines was initiated by the hospital.

GoR stated (February 2019) that repair of equipment and instruments was an ongoing process and in case they were not repairable under Annual Maintenance Contract (AMC) and Comprehensive Maintenance Contract (CMC), new equipment would be purchased.

The reply is not tenable as a large number of essential equipment in various OTs/ICUs were found non-functional for substantial period which was indicative of lapses in repair and maintenance of essential equipment.

(ii) Non-functional equipment in other departments/laboratories

Audit scrutiny of records of critical and costly medical equipment needed for specified treatments/diagnosis revealed the following:

- **Cardiotocography (CTG) Machine:** Scrutiny of records of labor room revealed that though there were five CTG machines available in labor room, all of them were inoperative since January 2017. In the absence of functional CTG machines, measurement of fetal heart beats was being done on an *ad hoc* basis with the help of stethoscopes. Thus, specialized monitoring machines for investigation of fetal heart beats of patients could not be accessed. GoR assured (February 2019) that it would be repaired soon as work was under process.
- **Clinical chemistry Analyzer:** A fully automated Tulip coral 300 analyzer, for performing biochemistry and immune turbidimetry assays from blood, serum, plasma and body fluids was installed (August 2013) in biochemistry laboratory at a cost of ₹ 11.03 lakh. Scrutiny of stock register and records of machines revealed (June 2018) that the machine was not working properly since its installation and remained faulty since February 2014. Though the machine was under Comprehensive Maintenance Contract (CMC) but was not made good (June 2018) as damage done by rats was not covered in CMC. Thus, the patients had to be diverted to the Dr.SN Medical College, Jodhpur for these tests.
- **ND YAG and CO₂ Lazer machines:** These machines were installed in Skin Department in February 2014 at a cost ₹ 9.98 lakh and ₹ 3.89 lakh respectively. It was observed that these machines were non-functional since October 2014 and April 2016 respectively due to faulty optical fiber cables damaged during shifting of machines from one room to another room. However, these machines were not repaired even as of July 2018. GoR assured (February 2019) that ND YAG laser machine would soon be repaired.
- **Cobalt-60 machine:** A Cobalt machine was installed in 2001 in the Radiotherapy Department for radiation therapy to treat 45-50 cancer patients per month. The Cobalt machine uses Co-60 radioactive source for therapy. It was observed that despite intimation by the dealing doctor (September 2011) to the head of the Department that the source was going to complete its active life and required replenishment, the order was placed only in December 2013. As a result, the machine became inoperative in June 2014 and remained so till January 2016 (19 months). Consequently, 850-900 cancer patients who could

have benefited from the services of the machine were deprived of access to radiation therapy.

(iii) Equipment installed under Public Private Partnership

- **Poor contract management of MRI machine:** An MRI machine was installed (February 2009) under Public Private Partnership by M/s Satyam Diagnostic Centre, Jodhpur (Licensee). Accordingly, the licensee was required to perform the 26 types of imaging tests at their prescribed rate and for 20 *per cent* cases of the poor category patients, tests were to be performed free of cost. The number of free cases were to be evaluated on monthly basis and carried forward to next month. At the end of calendar year, if the number of cases remained less than 20 *per cent*, the licensee was liable to pay for the number of cases not performed at a fixed rate of ₹ 2,000 as per condition number nine. The receipt for MRI investigation was to be issued by licensee through computer on the receipt book provided by the hospital and reconciliation of accounts was to be done on quarterly basis as per condition number 17.

Scrutiny of records of the MRI machine and information provided by the hospital revealed that the receipt books were not provided to the licensee by the hospital and fee receipts were issued by the licensee at its own level. Further, reconciliation of accounts was also not done as a result it could not be verified in audit that 20 *per cent* of the patients were actually benefitted by free MRI tests as per the contract.

It was also observed that the tests were to be performed at the prescribed rates, however no mechanism was in place to ensure that the licensee was charging the fee as per agreement.

- **PPP contract for Cancer Therapy Machine not finalized for 30 months:** GoR in the budget announcement for 2016-17 proposed to establish Linear Accelerator and Gamma Camera machines on PPP mode in radiotherapy department of the hospital for upgradation of the available facilities for cancer patients.

Scrutiny of records revealed that the P&C prepared bid proposals and forwarded (May 2016) to the Director, Medical Education. Accordingly, e-tenders for installation of the machines were invited (October 2017) and a pre-bid meeting was held on 23 October 2017, wherein one of the bidders suggested certain changes to the terms and conditions of contract. Technical and Financial Committee forwarded (December 2017) the revised bid documents to the Directorate, Medical Education, Jaipur whose approval was not received despite repeated reminders.

As the Department failed (August 2018) to finalise the terms and conditions of installation of Linear Accelerator and Gamma Camera machines on PPP mode, the machines could not be installed even after lapse of more than two years and deprived the cancer patients from the benefits of an upgraded diagnostic facility. GoR stated (February 2019) that matter is pending for approval.

(iv) Monitoring of equipment through ‘e-Upkaran’

‘e-Upkaran’, a web based application, was launched (October 2015) by Medical and Health Department, GoR for monitoring of usage and repair and maintenance of equipment and instruments installed at healthcare centres across the state from one platform. The application was available for utilization by all government health institutions including medical college attached hospitals. This application provides online status of Equipment Inventory, functionalities and maintenance status to the users.

Scrutiny of records, however, revealed that neither the Medical College nor MDM hospital was utilizing this application and did not upload any details on this software. Therefore, timely remedial action on many critical equipment could not be taken which deprived the patients of diagnostic services.

Only after being pointed out by Audit, GoR issued (February 2019) instructions to all HoDs and Unit Heads to provide information regarding procurement, installation, operation, repair, maintenance and upkeep of equipment on *e-Upkaran*. Further, computerisation of information was under progress.

3.7.2.4 Drugs, Consumables and Reagents Management

Drugs, sutures and surgical items are provided free of cost to all the patients visiting government hospitals in Rajasthan through the scheme ‘*Mukhyamantri Nishulk Dava Yojana*’ (MNDY). Under the scheme, more than 800 commonly used essential medicines, surgical and suture items (Essential Drug List) were to be made available to all visiting OPD and IPD patients at all Government Healthcare Institutions in the State.

In the MDM hospital, Jodhpur, the drugs were being distributed to patients through 14 Drug Distribution Counters (DDCs). In addition to drugs received from Rajasthan Medical Services Corporation Limited (RMSCL), the hospital also procured drugs locally of value ₹ 4.66 crore during 2013-18. Audit scrutiny revealed the following:

(i) Shortage of Essential Drugs

As per MNDY scheme guidelines, Drug Distribution Warehouses (DDWs) are to ensure continuous supply of drugs to the hospital sub store on receipt of requisitions as per availability of medicines and annual financial limit of the hospitals. Further, the drugs are issued to DDCs for distribution to the patients on presentation of the prescription of Medical Officer (MO).

Test check of records revealed that against the requisition of type of medicines included in Essential Drug List (EDL), 13.43 to 37.89 *per cent* drugs were not available for a period of more than four months during 2013-18. The details of requisition and availability of drugs is detailed in **Table 13**.

Table 13

Year	Types of essential Drugs required	Types of drugs unavailable for more than 4 months to 12 months	Percentage
2013-14	607	230	37.89
2014-15	745	172	23.09
2015-16	819	110	13.43
2016-17	801	127	15.86
2017-18	821	178	21.68

Source: Information made available by the hospital

GoR stated (February 2019) that the drugs and medicines which were not available/in short supply were procured as per availability of funds and it would be ensured that all indoor patients receive drugs.

(ii) Decline in beneficiaries of free of cost drugs

As per calendar year wise data available with the hospital, 8.70 lakh OPD patients had registered during the year 2013 which increased to 11.12 lakh during the year 2017. Thus, OPD patients under MNDY, increased substantially by 28 *per cent* during the period.

An analysis of total number of patients enrolled and benefited in MDM hospital during 2013-17, was conducted during Audit. The results of the analysis are detailed in **Table 14**

Table 14

Year	No. of outdoor patients enrolled during the year	No. of outdoor patients benefitted	Percentage
2013	8,70,164	7,64,932	87.91
2014	9,04,413	6,65,036	73.53
2015	9,25,369	7,43,683	80.37
2016	10,47,984	8,19,973	78.24
2017	11,11,686	8,60,930	77.44
Total	48,59,616	38,54,554	79.32

Source: Information made available by the hospital

Above data reveals that there was a gradual increase in number of outdoor patients enrolled during 2013-17 but the percentage of beneficiaries decreased. As a result, over the years, about 21 *per cent* of the registered patients failed to receive the requisite treatment/drugs prescribed.

Similar issue was also pointed out in paragraph 3.13.2.1 in the ‘CAG’s Audit Report on General and Social Sector for the year ending on 31 March 2015’. In this regard, the State Government assured Public Accounts Committee that efforts were being made to extend the benefits of the scheme to the maximum extent. However, in MDM hospital, the coverage of beneficiaries under MNDY consistently reduced to 78.24 *per cent* in 2016 and 77.44 *per cent* in 2017.

GoR stated (February 2019) that drugs and medicines were distributed for free to all patients under MNDY. The drugs and medicines which were not available/in short supply were purchased as per availability of fund to make

sure that all indoor patients received the drugs except those which were not in essential drugs list.

The reply is not acceptable as 68.12 *per cent* of the patients (188 out of 276 patients test checked) were not provided all the drugs prescribed by the doctors in the hospital and as many as 14.29 to 100 *per cent* medicines prescribed by doctors were not available in the hospital. This indicated that inspite of funds being available with RMRS as discussed in **paragraph 3.7.4.3**, medicines were not made available and undue financial burden was put on the patients, which was against the objectives of the MNDY scheme.

(iii) Non availability of freezer in Sub Store/DDC

A physical inspection (July 2018) of sub store and the DDCs, revealed that all the drugs were kept at room temperature as no freezer was available in the store. The drugs and injectable items which were required to be kept at low temperature were kept either in Ice boxes or in paper cartons due to non-availability of freezer during 2013-18 despite the fact that Jodhpur city recorded significantly high temperatures during most parts of the year.

GoR stated (February 2019) that acquisition of WIC freezer (mobile freezer) was under progress.

(iv) Prescription of non-EDL drugs without reason

As per MNDY guidelines, in every prescription slip, as far as possible, doctor has to prescribe medicines from essential drug list as per standard treatment guidelines. If medicines are prescribed out of EDL, valid clinical reason and proper justification for use of a specific medicine should be specified.

Test check of 276 prescriptions revealed that out of 456 drugs, 80 (17.54 *per cent*) drugs were not included in EDL, which were prescribed. However, the medical officers did not mention the valid clinical reason for prescribing non EDL drugs. On being pointed out, P&C stated (November 2018) that instructions would be issued to the doctors in this regard.

(v) Inadequate monitoring through “e-Aushadhi” software

For online monitoring, RMSCL adopted a drug inventory management system ‘e-Aushadhi’ which is a comprehensive online system capable of having detailed information about availability of medicines, from procurement point to consumption point, including Drug Distribution Counters.

Scrutiny of records of 14 DDCs in MDM hospital revealed that online ledger for issue of medicines was not updated in the software for a period ranging from four days to 10 months. As a result, there was mismatch in the number of available drugs as per software and actual availability at the DDCs. Further, only one out of 14 recruited Information Assistants (recruited in November 2013 for operation of DDCs under MNDY and MNJY) were posted at DDCs. Hence their utilization for real time updating of data was not being done and they were deployed for other clerical works. Similar issue was also pointed out

in paragraph 3.13.4.2 in the ‘CAG’s Audit Report on General and Social Sector for the year ending on 31 March 2015’. In this regard, the Public Accounts Committee also recommended (June 2017) to remove all the deficiencies as pointed out by Audit.

GoR while accepting the fact stated (February 2019) that to address the delay in updating of the system on daily basis, the necessary instructions were being issued.

3.7.3 Management of hospital services

Healthcare services provided by hospitals are broadly classified into line services (directly related to patient care), support services (indirectly related to patient care) and auxiliary services (facilitate delivery of healthcare services). The Audit findings related to management of these services are discussed below.

3.7.3.1 Line services

Line Services provided in a hospital are the various healthcare services which are directly related to patient treatment. These include Outdoor Patient Department (OPD) patients, Indoor Patient Department (IPD) patients, Emergency, Super Specialty, Maternity and other care services.

(i) **Availability of Super Specialty Services:** The detail of number of OPD and IPD patients, surgeries/procedures conducted by Super Specialty departments during 2017 are given in **Table 15**.

Table 15

S. No.	Name of Super Specialty Department (starting year)	Number of units	Number of beds	OPD days	Number of OPD patients in 2017	Number of IPD patients in 2017	Average OPD patients per OPD day in 2017	Surgery cases in 2017	OPD Patient per OPD day per Specialist
1	Cardiothoracic and Vascular surgery (January 2013)	01	25	01	2,834	1,031	55	215	55
2	Cardiology (2009)	01	37	04	43,797	7,422	211	3,018	105
3	Neurosurgery (1991)	01	73	03	9,167	3,077	59	1,004	59
4	Neurology (January 2017)	01	30	02	21,889	1,297	210	NA	70
5	Gastroenterology (January 2017)	01	30	02	7,052	1,134	68	4,759	34
6	Nephrology (IPD started from April 2018)	01	12	02	7,152	NA	69	NA	69
7	Urology (October 1987)	01	36	07	17,873	9,940	49	1,318	25

Scrutiny of records and information provided by the super specialty departments concerned, revealed the following:

- **Neurosurgery:** MCI norms prescribe that a unit⁴⁹ shall consist of not less than 20 and not more than 30 beds for super specialty. During 2013-17, though there were 73 beds in the department, it was being served by only one unit and number of operation cases also increased substantially by 18.40 *per cent* during 2013-17. Further, OPD was functioning for only three days in a week. As a result, the doctors were overburdened. Considering the high patient load, though an additional OT table was provided in the department but no additional units were planned to be established.
- **Neurology:** In this department, OPD was functioning only for two days despite average of 70 patients per doctor per OPD day during 2017. Audit analysis of average OPD per day and OPD duration during a day revealed that for each doctor in Neurology Department the average consultation time per patient⁵⁰ was only five minutes for examination of a patient as compared to 15 to 30 minutes in most other departments.
- **Gastroenterology:** In this department, OPD was functioning for only two days in a week and lengthy endoscopy procedures were being performed along with OPD. Further, this facility was not available in AIIMS, Jodhpur and other hospitals, hence the patients were being referred to MDM hospital.
- **Nephrology:** In the department, kidney transplant centre was inaugurated in 2015 but could not be started as of March 2018. Further, it was also noticed that 1,041 Chronic Renal Failure patients (546 in MDM hospital and 495 in MG hospital) requiring kidney transplant were registered during 2017-18. This indicates that large number of patients were deprived of the intended benefits of the Centre.
- **Cardiothoracic and Vascular surgery:** In this department, patients in OPD, IPD and surgeries increased by 50.50 *per cent*, 164.36 *per cent* and 35.22 *per cent* respectively during 2014-17. However, OPD unit was available only once in a week. Further, against sanctioned bed strength of 50 beds, only 25 beds were available as of March 2018. In violation of MCI norms, no full time Unit Head (Professor) and Assistant Professor were deployed/available in the department and the department was dependent on only one Associate Professor.
- **Cardiology:** In this department, patients in OPD, IPD and Cath Lab OT increased by 90.97 *per cent*, 46.97 *per cent* and 47.87 *per cent* respectively during 2013-17. Further, bed occupancy was 100 *per cent* throughout the year in IPD. However, the number of units/beds/cath labs were not increased during 2013-17.

⁴⁹ As per Norms for minimum staff prescribed by MCI, each unit shall consist of (a) Professor/Reader-1 (b) Lecturer-1 (c) Senior Resident/Tutor/Registrar-1 and (d) Junior Residents 3 to 4.

⁵⁰ Consultation time per patient is a Quality Indicator for measuring clinical care in OPD as per National Quality Assurance Standards, 2016.

GoR stated that necessary action would be taken to address the deficiencies as pointed out in audit.

(ii) Services provided by other departments

The details of number of units, beds, days, number of OPD/IPD patients in the 12 non-super specialty departments are given in **Table 16**.

Table 16

S. No.	Name of Department	Number of units	Number of beds	OPD Days	Number of OPD patients in 2017	Number of IPD patients in 2017	Average OPD patient per OPD day in 2017	Surgery cases in 2017	Average OPD ⁵¹ patients per doctor
01	Dentistry	1	7	7	36,315	168	99	87	99
02	Dermatology, Venereology and Leprosy (Skin)	1	33	7	2,53,491	429	694	NA	231
03	Ear, Nose and Throat (ENT)	1	47	7	81,720	1,113	224	899	56
04	General Medicine	3	123	7	1,33,242	14,820	365	NA	122
05	General Surgery	3	97	7	32,699	3,809	90	2,666	30
06	Obstetrics and Gynecology	2	88	7	39,047	10,511	107	4,085	36
07	Ophthalmology	2	60	7	59,744	3,164	164	2,912	55
08	Orthopedics	2	63	7	49,953	3168	137	2,303	68
09	Pediatrics	3	117	7	53,211	6,747	146	NA	73
10	Psychiatry	1	105	7	52,374	2,547	143	NA	71
11	Radio-Therapy	1	35	7	11,478	1,554	31	NA	31
12	Geriatric	1	30	4	16,866	931	81	NA	81

It can be seen from the table that:

- Average OPD per doctor per OPD day was very high in Skin (231), General Medicine (122) and Dentistry (99) despite having OPD on all days. GoR accepted (February 2019) that there was requirement of faculties as well as more units.
- As per MCI norm, a unit shall consist of not more than 30 beds. In four departments (General Medicine, Obstetrics and Gynecology, Pediatrics and Psychiatry), number of beds were in excess of norms. The number of units was not increased to restrict the beds per unit to the prescribed norms. GoR accepted (February 2019) that in medicine, gynecology, pediatrics and psychiatry departments, number of beds were more as per MCI norms due to huge patient load which could be reduced by increasing number of units.

(iii) Denial of Services to Bhamashah Card Holders

Bhamashah Swasthya Bima Yojana (BSBY) was launched in December 2015 by GoR for providing cashless indoor medical treatment to those families which were covered under National Food Security Act (NFSA) and *Rashtriya*

⁵¹ As per National Quality Assurance Standards 2016, OPD cases per doctor is an indicator for measuring efficiency of doctors in OPD.

Swasthya Bima Yojana. The scheme provides treatment up to ₹ 30,000 per family per year in general cases and upto ₹ 3.00 lakh for serious ailments which include packages for secondary and tertiary illnesses. A total of 21,051 patients were benefitted by free treatment under BSBY in the MDM hospital, Jodhpur during December, 2015 to March, 2018.

Scrutiny of records, however, revealed that during December 2015 to March 2018, free treatment under BSBY were denied to 12,945 card holders (38.08 *per cent*) as their Bhamashah Cards were not linked with National Food Security software.

GoR accepted (February 2019) that many of the Bhamashah card holders had not linked their Bhamashah card to the National Food Security Act. The fact, however, remained that a large number of BSBY card holders were deprived of the benefit of inpatient treatments at free of cost due to lack of awareness.

(iv) Emergency Services

MCI norms prescribed that each attached hospital should have Accident and Emergency Services, with distinct entrance for the emergency department. The emergency department should be equipped with lifesaving instruments such as Ventilator, Multi parameter monitor, Cardiac monitor with defibrillator, *etc.*, to treat accidental and emergency cases effectively.

It was however observed in Audit that:

- Against 30 beds in trauma unit, only 24 beds were provided.
- Against four fully equipped disaster trolleys (emergency trolleys), only one emergency trolley (crash cart) was available.
- Against four Ventilators, four Multipara Monitors, and four ECG machines, no Ventilators and Multipara monitors were available and only three ECG machines were available. GoR stated (February 2019) that construction of a 100 bedded dedicated trauma hospital as per MCI norms, was under progress and would address all the indicated deficiencies. Further, purchase of new ECG machines for Minor Operation Theatre was also under process.

(v) Maternity Services

- ***Incentives under Janani Suraksha Yojana not provided:*** *Janani Suraksha Yojana* (JSY), a centrally sponsored scheme was launched in September, 2005 for reducing the infant mortality rate (IMR) and maternal mortality rate (MMR) by encouraging and incentivizing the institutional deliveries. A financial aid of ₹ 1,400 to rural and ₹ 1,000 to urban pregnant women was to be given under this scheme. Director, Medical Health and Family Welfare Services, Jaipur also issued instructions (July 2015) that it was responsibility of the hospital to encourage opening of bank accounts of pregnant women at the time of registration.

Scrutiny of records revealed that out of 21,124 eligible women, cash incentive was not provided to 2,848 eligible women (13.48 *per cent*) during August

2015 to March 2018 due to non-availability of bank account details. Thus, the hospital failed to adhere to these instructions.

- **Incentives under Mukhyamantri Shubhlaxmi Yojana not provided:** The scheme was started from 1 April 2013 to encourage girl child birth, to reduce the death rate of girl child and mothers and to make sure that there is no discrimination on the basis of gender of the child. Under this scheme, financial assistance of ₹ 7,300 (₹ 2,100 on discharge from hospital, ₹ 2,100 after one year of birth and ₹ 3,100 after completion of five year of birth) was to be provided to the mother of the girl child. Further, the scheme was modified in June 2016 to increase the positive attitude towards the girl child and to improve their educational and health status. The scheme was also renamed (June 2016) as *Mukhyamantri Rajshree Yojana* and financial assistance⁵² of ₹ 50,000 was to be provided.

Scrutiny of records revealed that out of 5,070 cases, financial assistance was not provided in 364 cases (7.18 per cent) under *Mukhyamantri Shubhlaxmi Yojana* during August 2015 to May 2016. Further, out of 7,287 cases, financial assistance was not provided in 1,238 cases (16.99 per cent) under *Mukhyamantri Rajshree Yojana* during June 2016 to March 2018 due to non-availability of pass book or the fact that the beneficiary belonged to other state.

GoR while accepting the facts stated (February 2019) that some of the patients did not produce their bank account details and some patients belonged to other states. The fact however remained that a substantial number of women were deprived of incentive for institutional delivery and giving birth to girl child, as envisaged in the Government schemes.

(vi) Indicators for measuring quality of service

Norms prescribed by MCI regarding provision of healthcare services are based on number of MBBS/Post graduate (PG) seats sanctioned in the medical college. Further, the National Quality Assurance Standards, developed by National Health Systems Resource Centre (Ministry of Health and Family Welfare, GoI) provides a list of service quality indicators to assess the performance of public health facilities in the delivery of healthcare services. However, no such indicators have been adopted by the government tertiary care hospitals in Rajasthan. GoR stated (February 2019) that decision of adopting the service quality indicators are yet to be finalised.

3.7.3.2 Support Services

(i) Diagnostic Services

- **Non-registration of laboratories:** GoR issued instructions (June and September 2015) for registration of all the hospitals having capacity of 50 beds or more, under Section 11 of the Clinical Establishments (Registration & Regulation) Act, 2010, by 30 September 2015. It was observed that the hospital was not registered under the Act as of March 2018. GoR stated

⁵² ₹ 2,500 at the time of discharge from the hospital to mother and ₹ 47,500 in the name of girl for her education up to class XII in any government school in phases.

(February 2019) that no Government laboratory was registered in the state under the Act. The reply was not tenable as Government laboratories were also required to adhere to the provisions of the Act.

- **Non-obtaining of quality certification from NABL:** In accordance with Indian Council of Medical Research (ICMR) guidelines, the department decided (May 2014) for accreditation of Medical College attached Hospitals with National Accreditation Board for Testing and Calibration Laboratories (NABL). It was observed in Audit that the hospital was not accredited with NABL as of March 2018. GoR stated (February 2019) that pathology laboratory of the hospital was accredited by NABL. However, no reply was furnished for accreditation of biochemistry and microbiology laboratories.
- **Diagnostic tests not conducted due to non-availability of reagents:** Scrutiny of records of Central Laboratory of the hospital revealed (June 2018) that blood culture tests could not be conducted in microbiology laboratory for 15 months (from 05 November 2016 to 05 February 2018) due to non-availability of reagents (Antibiotic discs). The hospital, while accepting the facts, stated (June 2018) that alternate arrangement for conducting these tests was done in the Dr. SN Medical College. On being pointed out Principal & Controller stated (November 2018) that availability of reagents would be ensured.
- **Patients charged for free diagnostic tests:** MNJY scheme was launched in April 2013 with the objective of reducing high 'out of pocket' expenses borne by the patients for diagnostic tests and to provide all healthcare services in the Hospital free of cost. It was, however observed in Audit that during 2013-18, MDM Hospital irregularly charged ₹ 15.90 lakh⁵³ from the patients for various diagnostic tests which were to be offered free of cost. No specific reasons for charging the fee for these tests were intimated by the hospital, though called for during Audit. GoR stated (February 2019) that no fees was charged for tests under MNJY. Only few special tests which were not covered under MNJY were charged. The reply is not tenable because the accounts reflect charging of tests which were free under MNJY.

(ii) **Bio Medical Waste Management**

Bio Medical Waste (BMW) is generated by hospitals and other health providers during diagnosis, treatment, immunization of human beings. BMW consists of discarded drugs, waste sharps, microbiological and biotechnological waste, human anatomical waste, etc. Scrutiny of records in MDM Hospital, Jodhpur revealed the following:

- **Improper segregation, storage, transportation and disposal:** Rule 8 (1) of BMW Rules, 2016 provides that no untreated BMW shall be mixed with other wastes, while Rule 8 (2) provides that BMW shall be segregated into containers or bags at the point of generation in accordance with Schedule I of Rule 8 prior to its storage, transportation, treatment and disposal. It was,

⁵³ X-Ray: ₹ 12.00 lakhs, ECG: ₹ 0.16 lakh, Dialysis: ₹ 3.67 lakh, Sonography: ₹ 0.07 lakh.

however observed that segregation of BMW at the point of generation as per color coding was not done properly. BMW was kept in open spaces outside the dumping station in common containers without prescribing the color coding. Being in open space, there was no restriction on contact with BMW by stray animals or unauthorized persons entering the vicinity, increasing the risk of contamination. It was also found that BMW was being mixed with Municipal Solid Waste (MSW). GoR stated (February 2019) that a committee was formed to govern the segregation, storage and transportation of bio medical waste. At present, bio medical waste after segregation was being sent to Keru dumping station. The contention of GoR was not found correct as the waste was not being segregated even as of 11 January 2019.

- **Improper arrangement for autoclaving of sharp waste:** According to Schedule I of the Rule 8, needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades or any other contaminated sharp object that may cause puncture shall be stored in white (Translucent) disposal bag and autoclaved. It was, however observed that sharp waste was not being segregated at generation point (Ward, laboratory, and Operation theaters etc.) due to absence of white containers/bags. As a result, sharp waste was not being treated despite the availability of an Autoclave. Thus, it was lying idle and not being utilised for treatment of sharp waste as prescribed in rules.
- **Absence of Effluent Treatment Plant (ETP):** As per BMW Rules, 2016, ETP was to be established in a hospital for treatment of liquid wastes. However, it was not established in MDM hospital as of March 2018. As a result the infected sewage generated in the hospital consisting of three kinds of contamination, bacterial, nuclear and chemical wastes, was being discharged directly into the public sewer system. A similar issue was also pointed out in paragraph 2.4.1 the 'CAG's Audit Report on General and Social Sector for the year ending on 31 March 2013'. Public Accounts Committee recommended (June 2015) that all the deficiencies pointed out by Audit may be rectified. GoR stated (February 2019) that the matter was under process. However, the fact remained that despite instructions of PAC, the deficiencies have not been addressed for more than three and a half years.

(iii) Poor Ambulance Services

Indian Public Health Standards for district hospitals prescribe at least four ambulances fully equipped with basic life support equipment (oxygen cylinder, ventilator, defibrillator etc.) for hospital having 301 to 500 beds. Further, serviceability and availability of equipment and drugs in the ambulance needs to be ensured through checking on daily basis.

Though eight ambulances were available in MDM hospital as of March 2018, none of the ambulances were equipped with life saving equipment. Thus, none of the available ambulances were able to extend life saving support to the patients in emergency and were being used merely as a transport vehicle.

GoR stated (February 2019) that new advanced life support (ALS) ambulance has been purchased and will be delivered to hospital soon. However, it was not delivered as of March 2019.

(iv) Mortuary services

A Mortuary unit of the Department of Forensic Medicine and Toxicology is functioning in the hospital which attends to medico legal cases including postmortem on dead bodies. Five cold storages for accommodation of 24 dead bodies were provided in the mortuary. Joint physical inspection of the mortuary revealed the followings:

- Building was below the road level due to which there was stagnation of rain water.
- Demonstration gallery for students was found in dilapidated condition increasing the risk of injury for students entering the gallery.
- Three out of five cold storage units (12 chambers) were found to be out of order.
- Unit Head in a letter to the Superintendent, stated that the viscera shelf needed to be repaired and a separate viscera room for keeping viscera samples was required.

GoR accepted the facts and stated (February 2019) that renovation work of Mortuary was under progress and Viscera room was also under construction.

(v) Dietary Services

As per norms prescribed by MCI, central kitchen should be commodious (spacious), airy, sunny and clean with proper flooring and with exhaust system. It should be provided with proper and clean working platforms. The services trolleys should cater for hot food and should be covered and made of stainless steel. It is also stated that services of qualified dietician are essential to prescribe diet on scientific lines for different types of patients.

Scrutiny of records revealed that sufficient utensils, trolley, staff etc., were not available in the hospital kitchen to provide meals to the patients. The meals were not served with due hygiene as the cook/serving staff did not wear head masks and gloves etc., during cooking/serving of food to the patients. Further, during 2013-18, no dietician was posted to prepare diet chart for the patients.



GoR accepted (February 2019) that the post of dietician was vacant. However, the cook maintained hygiene of the food. The reply was not tenable as the instruction regarding wearing of head masks and gloves by the cook/serving staff at the time of cooking/serving of food to the patients, was not found adhered to during physical inspection by Audit.

(vi) Laundry Services

As per MCI Norms B 2.5 (Amended up to August 2017) for 250 P.G. Seats, the Central Mechanical laundry shall be provided with bulk washing machine, Hydro-Extractor, flat rolling machine. Further, laundering of hospital linen shall satisfy two basic considerations, namely, cleanliness and disinfection. The Principal & Controller of the Medical College, also directed (May 2017) to use different colour bed sheets on different days of the week to ensure that bed sheets are changed every day. Physical inspection of 33 wards (June-July 2018) revealed that bed sheets were being changed according to prescribed color. During patients survey IPD patients also confirmed the cleanliness of bed sheets and there was no complaint in this regard.

3.7.3.3 Auxiliary services

Auxiliary Services in a hospital are those services which are not directly related to healthcare but contribute to facilitate the delivery of healthcare services. Services such as patient registration, patient safety, transportation, stores etc., are generally included under auxiliary services. Audit scrutiny of delivery of these services revealed the following:

(i) Patient registration

- **Insufficient registration counters for Patients:** Registration of patients is the first step for getting healthcare facilities in hospitals. In 2017, on an average 3,250 patients visited the hospital daily. Scrutiny of records revealed that there were ten counters in the hospital for registration of patients. Further, a patient survey of 142 patients was conducted wherein 74 patients reported waiting time of 15 minutes, 29 patients reported waiting time of 15 minutes to 30 minutes, 28 patients reported waiting time of 30 minutes to one hour and 11 patients reported waiting time of one hour to two hour. Further, complete information i.e., age, gender, address, category, occupation, status, mobile number etc., of patients was not being noted at the registration counter. These facts indicated that the number of counters were not sufficient to handle the volume of work.

GoR accepted (February 2019) the facts and stated that registration counters would be increased as per availability of staff. Further, implementation of integrated Health Management System (iHMS) was under process, which would enable the patients to register themselves online and to access the reports personally on computer/mobile.

- **Drug Distribution Counters not increased with increasing patient load:** 14 Drug Distribution Counters (DDCs) were established in the hospital to distribute the medicines free of cost to the patients under *Mukhyamantri*

Nishulk Dava Yojana (MNDY). The scheme was started in October 2011. Scrutiny of records revealed that the total number of patients increased from 7.38 lakh to 11.85 lakh during 2012-17. Also, 42 (29.58 *per cent*) out of 142 patients surveyed, reported that they had to wait for more than 30 minutes to get the medicines from DDCs. However, the Hospital did not plan to increase the number of DDCs to cater for the increasing patient load. GoR stated (February 2019) that proposals for additional DDCs would be taken up.

(ii) Patient safety

- **Legal requirements for laboratory equipment:** Safety code issued by Atomic Energy Regulatory Board (AERB) stipulates that to operate diagnostic X-Ray/X-Ray equipment, the hospital would obtain the license for operation and provide radiation protection devices such as protective lead glass viewing window, barrier, apron, goggles and thyroid shields, ceiling suspended glass, couch hanging flaps, gloves etc.

It was, however observed that 9 out of 11 X-Ray machines (81.82 *per cent*) were operating without obtaining AERB registration. However, these nine machines got AERB registration in October 2018 at the instance of audit. Further, Radiology department neither had protective lead glass viewing window nor protective door in the X-ray rooms. Thus, radiology laboratories are functioning without adherence to AERB safety codes thereby exposing the patients and technicians to harmful radiations. GoR assured (February 2019) that lead goggle and lead thyroid shield would soon be procured by the hospital.

- **Fire Safety Certificate of Hospital not obtained:** As per instructions of Ministry of Health and Family Welfare, Government of India issued in November 2016, 'No Objection Certificate/Fire Safety Certificate' should be obtained from the Local Authorities/Fire Department in public interest. Scrutiny of records revealed that the MDM hospital did not initiate any action to obtain Fire Safety Certificate from fire department though fire extinguishers were installed in various wards/departments. Further, eight out of 44 test checked wards did not have fire extinguishers including Emergency Medical ward where an incident of fire occurred in 2016. It was also observed that no staff in wards were provided training to operate the firefighting equipment during 2013-18. GoR assured (February 2019) that fire extinguishers would be procured and provided to all departments and fire safety certificate would also be obtained.

3.7.4 General Administration and Financial management

The Principal and Controller (P&C) of Dr. SN Medical College, Jodhpur is controller of the hospital and is responsible for planning and budgetary controls of the hospital. MDM Hospital, Jodhpur is headed by Superintendent, who is responsible for delivery of healthcare services in the hospital. In addition, Rajasthan Medicare Relief Society (RMRS) has been formed in every government hospital to strengthen and modernise the healthcare services and provide them at nominal cost to the patients.

3.7.4.1 Financial management

To meet the general administrative expenses of the hospital and for implementation of various schemes⁵⁴, funds are allotted annually from the state budget to the teaching hospitals through controlling Medical colleges. During 2013-18, funds to the tune of ₹ 265.00 crore were allocated to MDM Hospital through Dr. SN Medical College, Jodhpur under various heads⁵⁵ and ₹ 265.81 crore were incurred on the items as detailed in **Table 17**.

Table17

(₹ in crore)

Year	Allotment	Total Expenditure	Salary and General Establishment (per cent)	Contractual Services ⁵⁶ (per cent)	Repair and Maintenance (per cent)	Drugs and Medicine (per cent)	Diagnosis/ Investigations (per cent)
2013-14	34.15	35.31	22.63(64.09)	3.34(9.46)	0.70(1.98)	7.97(22.57)	0.67(1.90)
2014-15	39.49	39.95	25.41(63.60)	4.22(10.56)	0.74(1.85)	7.94(19.88)	1.64(4.11)
2015-16	54.56	55.16	34.46(62.47)	5.22(9.46)	1.00(1.81)	11.61(21.05)	2.87(5.21)
2016-17	62.62	62.11	38.41(61.84)	5.79(9.32)	1.07(1.72)	13.79(22.21)	3.05(4.91)
2017-18	74.18	73.28	43.70(59.63)	6.30(8.60)	1.21(1.65)	18.79(25.64)	3.28(4.48)
Total	265.00	265.81	164.61(61.93)	24.87 (9.36)	4.72(1.77)	60.10 (22.61)	11.51(4.33)

Source: information provided by MDM hospital, Jodhpur

It can be seen from the above table that:

- A major portion of budget allocation was incurred on 'Salary, General Establishment and contractual services' during 2013-18, which constituted 71.29 per cent of total expenditure.
- There was only a marginal increase in expenditure on drugs & medicines whereas decrease on repair and maintenance of hospital assets during 2013-18, as compared to increase in patient load by 60.57 per cent.

Under Capital head, ₹ 47.56 crore was allotted for 17 works⁵⁷ of which 13 works were completed at expenditure of ₹ 48.91 crore during 2013-18. Four works⁵⁸ were in progress as of March 2019.

Audit observed that only two proposals of major civil works were sent by the hospital to the college during 2015-16 and those works that were announced in annual budgets were undertaken. Though, seven works were undertaken for improvement of hospital facilities but they were on the basis of directions of the High Court (May 2013 to March 2015) regarding a public interest

⁵⁴ Mukhyamantri Nishulk Janch Yojana (MNJY) and Mukhyamantri Nishulk Dava Yojana (MNDY).

⁵⁵ State general budget: ₹ 189.24 crore, MNJY: ₹ 27.86, MNDY (RMSCL): ₹ 40.00 crore and MNDY (MDM): ₹ 7.90 crore.

⁵⁶ Outsourcing of security guards and contract for housekeeping and cleanliness.

⁵⁷ Three works sanctioned prior to 2013-14, two works announced in annual budget 2013-14, seven works undertaken in 2014-15 under public interest litigation, two works (2015-16) and three works under budget announcement (2017-18).

⁵⁸ Development work for renal transplant facilities, new building of cath lab, extension of mother and child wing and construction of trauma centre.

litigation. On being enquired, department stated (January 2019) that, due to budget ceiling, proposals for new works were not sent during 2015-18.

3.7.4.2 Non approval of Master Plan

Planning in respect of expansion, upgradation of existing facilities and other requirements of the hospital is essential to ensure continuous and improved access to quality healthcare services to all the persons visiting the hospital.

It was, however observed that no short term or long term plan was approved for expansion of MDM Hospital (under Dr. SN Medical College) during 2013-18, especially in view of the continuously increasing patient load. Accepting the facts that extension of Medical College and all attached teaching hospitals had been done on *ad hoc* basis and expansion of various departments was done without any prior planning. The Government of Rajasthan (GoR) in Budget 2015-16 announced that all future expansion of Medical Colleges and teaching hospitals would be through a Master Plan.

MDM hospital prepared and sent (December 2015) the proposal to Dr. SN Medical College. Though Dr. SN Medical College submitted (October 2016) its Master plan for all attached hospitals for approval of GoR, however, the approval was awaited as of February 2019.

3.7.4.3 Management of revenue generating services

Rajasthan Medicare Relief Society (RMRS) collects the user charges like patients registration fee and diagnosis charges for high end diagnostic services (MRI and CT Scan etc.) from the patients. RMRS also maintains the assets (Shops, Canteen and Parking spaces) of the hospitals and leases them on rent. Funds collected by RMRS are utilised where the budget allocated by the GoR is insufficient or the budget is not available, as an additional amount for procurement of x-ray films, CT films, kits and chemicals; repair, maintenance and purchasing of various machines and equipment; construction, renovation and repair of building etc., as per the RMRS Revised Rules, 2007.

Two important schemes i.e. *Bhamashah Swasthya Bima Yojana* and *Mukhyamantri Jeevan Raksha Kosh* are also implemented through RMRS. During 2013-17, total income and expenditure of RMRS was ₹ 14.11 crore and ₹ 12.90 crore respectively, leaving an accumulated surplus of ₹ 1.21 crore. The Management of RMRS did not draw a plan to utilize this surplus accumulated during 2013-17.

Further in following cases, RMRS was not realizing the revenue from the assets leased/rent out.

- Two shops established for OPD registration in hospital premises were let out for *e-Mitra* centres to private operators in 2011 without an agreement. Though the operators were conducting commercial activities but no rent was charged from them since 2011.

- A private chemist shop was also running in the premises of hospital without any agreement and no rent was recovered from the shopkeeper during 2013-18.
- A piece of land was allotted by GoR during 1985 to a trust for construction and operation of a Dharamshala without any Memorandum of Understanding. However, the trust let out three shops to the chemists in the Dharamshala without any approval of the hospital management. The trust was not depositing the rent realized from the chemists to the hospital.

GoR stated (February 2019) that notices have been issued to all shopkeepers to vacate the shops. The fact remains that RMRS was not able to collect potential revenue from the various hospital assets which could have been utilised for betterment of hospital services.

3.7.4.4 Incomplete implementation of ‘Arogya Online’

Hospital Management Information System (HMIS) also known as ‘Arogya Online’ project was initiative by GoR for better delivery of healthcare through automation. The Arogya Online software was to manage critical health related data of Hospital operations including vital records of patients and providing solution to support the Hospital administration through sharing of information. The project was planned (September 2011) to be implemented in two phases and a total of 28 modules (13 core clinical modules⁵⁹, 11 Back office modules⁶⁰ and four miscellaneous modules⁶¹) were required to be developed within 12 months i.e. by August 2012.

It was however noticed that two out of 13 core clinical modules, eight out of 11 back office modules and three out of four miscellaneous modules were not developed even as of March 2018. Due to non-development of these modules, hospital operations scheduled for computerisation in respect of these modules were done manually.

GoR stated (February 2019) that Arogya Online project was planned in 2011 and as of now a higher version i.e. iHMS in place of Arogya online has been taken up which is under process of implementation.

⁵⁹ (i) Registration (ii) Emergency (iii) Out Patient Management (iv) Pharmacy Management (v) Billing (vi) Investigation (vii) In patient Management (viii) Operation Theatre (ix) Patient Medical Record (x) Diet Kitchen (xi) Blood Bank (xii) Enquiry and (xiii) User Management.

⁶⁰ (i) Store Management System (ii) Procurement & Purchase (iii) Central Sterile Services (iv) Personnel Information System (v) Finance Management System (including RMRS and Lifeline) (vi) Bio Medical Waste/Housekeeping (vii) Transport (viii) Linen/Laundry (ix) Bio Medical Engineering Department (x) Administrative Module and (xi) Appointment and Roster Management.

⁶¹ (i) Right to Information Module (ii) Health Portal (iii) File Tracking System (FTS) and (iv) Library Management System.

3.7.4.5 Patient Feedback Mechanism

For improvement in the healthcare services, it is necessary to maintain mechanism to get feedback from patient regarding satisfaction and suggestions.

It was observed that no mechanism to get feedback from patients regarding satisfaction, grievances, redressal thereof etc., for further improvement in the healthcare services provided by the hospital, was in existence. It was also observed that no complaint register was maintained in the hospital during 2013-18. In the absence of any record regarding feedback from patient, Audit could not ascertain the response of hospital administration to resolve the patient specific issues and grievances. GoR stated (February 2019) that instructions to get feedback from patients about hospital services have been issued. Further, a complaint box and complaint register were being kept at main enquiry of the hospital.

3.7.4.6 Physical verification of stores not conducted

As per rule 12(1) of General Financial and Accounts Rules (GF&AR) Part-II, physical verification of all stores is required to be conducted at least once in a year. Scrutiny of records however, revealed that physical verification of the stores was not conducted during 2016-18. Further, reconciliation of items (Machinery, Equipment, Tools and Plants) as per stock register with the items actually installed in various departments/wards was also not done. Accordingly, physical availability and disposal of unserviceable articles could not be verified by Audit. GoR stated (February 2019) that instructions for physical verification of stores had been issued in December 2018.

3.7.4.7 Prescription Audit

An Audit of one *per cent* of the total prescriptions issued by the doctors in the hospital was to be conducted by a committee at the medical college level. It was however observed that neither was a committee constituted by the medical college nor was the prescription audit carried out in the hospital during 2013-18. Only after being pointed out by Audit, GoR constituted (December 2018) a three member committee for prescription audit.

3.7.5 Conclusion

Mathura Das Mathur (MDM) Hospital, Jodhpur is the largest hospital in the western region of Rajasthan providing referral and tertiary healthcare services. Though, the number of patients increased from 7.38 lakh to 11.85 lakhs during 2012-17, the augmentation of its facilities was not commensurate to the increasing load of patients. Resource management was weak as Operation Theaters (OTs), Intensive Care Units (ICUs) and wards suffered from many infrastructural deficiencies and shortages of Medical Officers and nursing staff. Beneficiaries were deprived of free drugs as all the essential drugs were not available. Due to insufficient resources, various important hospital services like number of OPD days in a week, consultation time per patient and diagnostic services suffered. The hospital was not following the

legal/regulatory requirements regarding management of bio-medical waste, patient safety and hospital safety.

Thus, mismanagement of resources of the hospital coupled with weaknesses in planning and monitoring resulted in deficiencies in the services being provided to the beneficiaries.

Recommendations:

GoR should

- 1. Take adequate initiatives to increase the number of units in the departments wherever necessary, to address the increasing patient load.*
- 2. Ensure adequate availability, timely repair and maintenance of prescribed medical equipment in ICUs, OTs, wards and laboratories so that equipment downtime is minimized and services are rendered to the patients without any hindrance.*
- 3. Ensure effective inventory management to maintain adequate and regular supply of essential drugs and reagents through stores and Drug Distribution Counters so that no beneficiary is deprived of free medicines and diagnostic tests.*
- 4. Adopt defined service quality indicators and benchmarks so that healthcare outcomes can be measured and assessed for future improvements.*
- 5. Increase the awareness amongst the beneficiaries of the Janani Suraksha Yojana, Mukyamantri Shubhlaxmi Yojana and Mukyamantri Rajshree Yojana so that they are able to avail of all benefits (by providing complete bank details etc.) under these schemes.*

Animal Husbandry, Gopalan and Co-operative Departments

3.8 Activities for Dairy Development in Rajasthan

3.8.1. Introduction

After agriculture, animal husbandry is the most important source of livelihood in the state. Animal husbandry which includes cattle and other livestock, contributes over 11 per cent to the gross state domestic product. Rajasthan has the second highest livestock population and contributes 12.72 per cent of all milk production making it the second largest milk producer state in India. During 2017-18, 1.65 crore milch animals produced 2.24 crore tonnes of milk in the state. During the year 2017-18, Rajasthan had 834 gram per capita per