

(presented on 16th December, 2014)

THIRTEENTH KERALA LEGISLATIVE ASSEMBLY

**COMMITTEE
ON
PUBLIC ACCOUNTS
(2014-2016)**

SEVENTYNINTH REPORT

On

**Paragraphs relating to Health and Family Welfare Department contained in
the Report of the Comptroller and Auditor General of India for the year
ended 31st March, 2010 (Civil)**

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Shri G. P. Unnikrishnan, Under Secretary.

INTRODUCTION

I, the Chairman, Committee on Public Accounts, having been authorised by the Committee to present this Report on its behalf, present the Seventy Ninth Report on paragraphs relating to Health and Family Welfare Department contained in the Report of the Comptroller and Auditor General of India for the year ended 31st March, 2010 (Civil).

The Report of the Comptroller and Auditor General of India for the year ended 31st March, 2010 (Civil) was laid on the Table of the House on 28-6-2011.

The Report was considered and finalised by the Committee at the meeting held on 9th December, 2014.

The Committee place on record its appreciation of the assistance rendered to it by the Accountant General (Audit) in the examination of the Audit Report.

Thiruvananthapuram,
16th December, 2014.

DR. T. M. THOMAS ISAAC,
Chairman,
Committee on Public Accounts.

REPORT

HEALTH AND FAMILY WELFARE DEPARTMENT

Mental Health Care Facilities in Kerala

HIGHLIGHTS

Mental health care activities in the State of Kerala are governed by the Mental Health Act, 1987 enacted by Government of India and the State Mental Health Rules, 1990. The State Mental Health Authority established in 1993 under Section 4 of the Act is responsible for regulation, development and co-ordination of all activities in the State connected with mental health. A review of the mental health care facilities revealed absence of proper mental health planning; non-achievement of objectives of the Mental Health Policy, 2000; non-utilisation of Central funds; inadequate infrastructure facilities; shortage of manpower and inadequate monitoring of mental health care facilities available in the State.

The State Government had not formulated any plan to implement the objectives envisaged in the Mental Health Policy, 2000.

Out of ₹ 9.98 crore received during 2005-06 to 2008-09 from Government of India for implementation of schemes under the National Mental Health Programme, ₹ 4.07 crore remained unspent as of March 2010 in Treasury Savings Bank Accounts and Nirmithi Kendra/Public Works Department.

The State Government did not conduct any epidemiological survey to identify mentally ill persons in the State as recommended by the National Human Rights Commission.

Psychiatric institutions and nursing homes were functioning without all the minimum facilities required under the Act.

Out of 12 construction works taken up in three Mental Health Centres and three Medical College Hospitals using Central funds, only eight works were completed as of August 2010.

Shortage of manpower such as psychiatrists, clinical psychologists and paramedical staff in three mental health centres ranged between 64 and 94 per cent.

No inspection of the psychiatric hospitals and nursing homes was carried out by the Inspectors. Boards of visitors were not appointed for private psychiatric hospitals and nursing homes.

Introduction

In Kerala, 5.87 per cent (18.66 lakh) of the total population as per the 2001 census is affected with mental illnesses such as psychosis, bipolar disorder, alcohol and drug abuse, etc., compared to the all India figure of two per cent. The suicide rate (25.2 per lakh population) in Kerala is also high compared to the national average of 10 per lakh population. Moreover, Kerala is one of the leading states in consumption of alcohol. Hence mental health care assumes importance in the overall health care of the people. The mental health care activities in the State are governed by the Mental Health Act, 1987 (Act) enacted by Government of India and the State Mental Health Rules, 1990. The State Mental Health Authority (SMHA) established in 1993 under Section 4 of the Act is responsible for regulation, development and co-ordination of all the activities in the State connected with mental health. Government also formulated a Mental Health Policy in 2000. The State has three* Mental Health Centres (MHC) and 20† Medical College Hospitals (MCH) each having a psychiatric department apart from 17 District/Taluk Hospitals with psychiatric units to cater to the needs of the mentally ill patients. Besides, there are about 139 private psychiatric hospitals/nursing homes in the State providing mental health care. The District Mental Health Programme launched by Government of India as part of the National Mental Health Programme, envisages providing of sustainable basic mental health services to the community and integrating those services with other services. The Social Welfare Department of the Government is responsible for proper rehabilitation of mentally cured patients in the State.

Organisational set-up

The Secretary, Health and Family Welfare Department has overall control over the health care services in the State. The SMHA supervises all MHCs and other mental health service agencies in the State and also advises the State Government on all matters relating to mental health. The official members of the SMHA are the Secretary to Government, Health and Family Welfare Department, the Director of Health Services (DHS) and the Medical Superintendent, Government Mental Health Centre or the Head of the Department of Psychiatry, Government Medical College Hospital. The non-official members include a medical psychiatrist, a clinical psychologist and a social worker.

Each of the Government MHCs is headed by a Superintendent. The psychiatric wards/units in the MCHs as well as District and Taluk Headquarters Hospitals are under the immediate control of the Superintendents of the respective institutions. The DHS has overall control of the above institutions.

*Kozhikode, Thiruvananthapuram and Thrissur.

†Five in Government Sector, two in Co-operative Sector and 13 in Private Sector.

Audit objectives

The audit objectives were to examine and assess whether:

- there was proper planning to achieve the objectives of the Mental Health Act, 1987, the State Mental Health Rules, 1990 and the State Mental Health Policy, 2000;
- adequate funds were provided for mental health services and were utilised economically, efficiently and effectively;
- provisions of the Mental Health Act, 1987 and the State Mental Health Rules, 1990 were carried out effectively and sufficient infrastructure was available to cater to the needs of mentally ill patients;
- there was adequate manpower available to provide mental health care facilities; and
- there existed proper monitoring of the services provided through mental health care units.

Audit Criteria

The following audit criteria were adopted:

- The Mental Health Act, 1987
- State Mental Health Rules, 1990
- Mental Health Policy, 2000 of the State Government
- Orders and Instructions/guidelines issued by State/Central Government
- Protection of Human Rights Act, 1993

Audit coverage and methodology

A review of the working of Government Mental Health Centres was included as Paragraph 3.5 in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1994 (Civil). After examining the paragraph in December 2001, the Committee on Public Accounts made 28 recommendations. It was seen from the Action Taken Note by Government (September 2006) that out of 28 recommendations, 19 were implemented, another four were partially implemented and the remaining five* were not implemented.

* (1) Construction works, (2) Improvement of facilities in Mental Health Centres, (3) Filling up of vacant posts, (4) Services of clinical psychologists to be extended to all patients admitted, (5) Introduction of pension scheme for poor mentally ill patients.

The performance audit of the mental health care facilities in the State was conducted during April to July 2010 covering the period 2005-06 to 2009-10. Audit scrutinised records of the DHS, SMHA, all the three* MHCs, Psychiatry departments of three† (out of five) MCHs, psychiatry wards of two‡ (out of eight) District Hospitals, seven§ Taluk Headquarters Hospitals, selected on the basis of the cluster sampling method. In addition, the Institute of Mental Health and Neuro Sciences (IMHANS) at Kozhikode, two rehabilitation centres under the direct control of Social Welfare Department and eight|| non-Governmental institutions receiving grants from Central and State Governments were also scrutinised by Audit.

An entry conference was held in May 2010 with the Secretary to Government, Health and Family Welfare Department during which the audit objectives were explained. An exit conference was also held with the Secretary in October 2010 wherein both the achievements and deficiencies noticed in the course of the review were discussed and suggestions/explanations of the department were incorporated in the review. We acknowledge the co-operation extended by the departmental authorities to the audit team during the course of audit.

Audit findings

The review revealed some achievements and deficiencies/shortcomings in providing mental health care facilities in the State which are discussed in the succeeding paragraphs.

Planning

The State Government has to play a pivotal role in discharging its functions to ensure quality mental health facilities to the affected people in the State as envisaged under the Mental Health Act, 1987. Accordingly, State Government announced (2000) the State Mental Health Policy which envisaged development of an integrated mental health system. The long-term objectives were to maximize community and clinic based resources to persons suffering from mental disorders; to provide cost-effective psychiatric treatment to them; to identify groups at risk and provide them with special support services, etc.

* Kozhikode, Thiruvananthapuram and Thrissur.

† Kozhikode, Thiruvananthapuram and Thrissur.

‡ General Hospital, Ernakulam and District Hospital, Kollam.

§ Chirayinkil, Karunagappally, Mavelikara, Muvattupuzha, Nedumangad, Neyyattinkara and Tirur.

|| Bodhi and Karma (under Abhaya, Thiruvananthapuram), Pratheeksha (under Trivandrum Social Service Society), ACCEPT, Punnāpra and ACCEPT, Kattanam (under Changanacherry Social Service Society), Nirmala Nikethan, Kalamassery, St. Joseph's Bhavan, Pullazhi, Thrissur and ICCONS, Thiruvananthapuram.

The main short-term objectives were to develop user groups and their networking; to provide mental health care services at Panchayati Raj level and to promote prevention, treatment, rehabilitation and research in the field of mental health. It also contained a provision for review of the implementation of the objectives every five years.

The State Government had not formulated any mental health plan to implement the short-term and long-term objectives of the Mental Health Policy including financing, quality improvement and monitoring in a phased manner. The State Government also did not conduct any review of the progress of implementation of the objectives, as declared in the mental health policy. Consequently, the State Government could not achieve the objectives declared in the policy in full as discussed in the succeeding paragraphs of this Report.

Financial Management

The funds required for mental health care activities were provided by the State through the State Budget. In addition, Government of India (GOI), Ministry of Health and Family Welfare released grants-in-aid for strengthening of the psychiatric wings of the MCHs; for upgradation of MHCs and for activities under the District Mental Health Programme (DMHP) in five* selected districts. The details were as given in Table 1.1.

TABLE 1.1: DETAILS OF FUNDS RELEASED BY STATE AND CENTRAL GOVERNMENTS

Year	(₹ in crore)			
	State Funds		Central Funds	
	Provision	Expenditure	Received	Utilised
2005-06	13.27	11.29	7.54	7.54
2006-07	14.28	11.78	0.26	0.26
2007-08	13.99	12.22	1.81	1.81
2008-09	17.20	16.99	0.37	0.37
2009-10	16.37	16.90	Nil	Nil
Total	75.11	69.18	9.98	9.98

Source: Accounts figures and sanctions from Government of India and utilisation certificates furnished by the institutions.

* Idukki, Kannur, Thiruvananthapuram, Thrissur and Wayanad.

Non-utilisation of Central funds

Though the entire funds released by GOI were shown as utilised, audit scrutiny revealed that out of ₹ 9.98 crore released by GOI, ₹ 4.07 crore remained unutilised as of March 2010 as discussed below:

(i) *Strengthening of psychiatric wings of MCHs*

During 2005-06 to 2007-08, ₹ 1.59 crore was released by GOI. Of this, ₹ 49.46 lakh was lying unutilised in Treasury Savings Bank Accounts from 2007-08 onwards and ₹ 9.27 lakh remained unutilized with the Nirmithi Kendra* from July 2008 onwards as indicated below:

TABLE 1.2: UTILISATION OF FUNDS FOR STRENGTHENING OF PSYCHIATRIC WINGS

(₹ in lakh)

Name of Institution	Amount received	Amount utilized	Balance remaining unutilised		Reasons for non-utilisation
			in Treasury Savings Bank	with Nirmithi Kendra	
Alappuzha	30.68	5.23	16.18	9.27	Building not completed, Equipments and furniture not procured
Kottayam	45.20	27.00	18.20	Nil	Furniture and equipments not procured
Kozhikode	38.80	36.02	2.78	Nil	Furniture not procured
Thrissur	44.66	32.36	12.30	Nil	Furniture and equipments not procured, Electrical work yet to be completed
Total	159.34	100.61	49.46	9.27	

Source: GOI Orders and replies furnished by MCHs.

* State autonomous body engaged in construction of houses.

(ii) *Upgradation of MHCs*

In October 2005, GOI released ₹ 6.45 crore to MHC, Kozhikode, Thiruvananthapuram and Thrissur for upgradation. The Government ordered (January 2006) that the funds should be kept in a non-interest bearing Special Treasury Savings Bank Account opened in the joint designation of the Superintendent and the Lay Secretary of the institution. The upgradation involved construction of wards, purchase of machinery and equipment, maintenance, etc. Out of ₹ 6.45 crore released by GOI, ₹ 5.09 crore was deposited with the Public Works Department (PWD) for construction of wards, purchase of machinery and equipments, maintenance, etc. and ₹ 1.36 crore was kept in Treasury Savings Bank Account. Out of ₹ 5.09 crore deposited with PWD, ₹ 1.89 crore remained unutilised and the amount of ₹ 1.36 crore in treasury also remained idle. Details are given in Table 1.3 below:

TABLE 1.3: DETAILS OF FUNDS RECEIVED FOR UPGRADATION OF MHCs

Name of Institution	Amount received	Amount deposited and balance available with PWD			Amount kept in Treasury Savings Bank Account
		Deposited	Utilized	Balance	
MHC, Kozhikode	2.85	2.49	1.39	1.10	0.36
MHC, Thiruvananthapuram	2.50	1.75	1.05	0.70	0.75
MHC, Thrissur	1.10	0.85	0.76	0.09	0.25
Total	6.45	5.09	3.20	1.89	1.36

Source: GOI Orders and replies of MHCs.

(iii) *District Mental Health Programme*

During 2005-06 to 2008-09, ₹ 67.79 lakh was received from GOI for implementation of District Mental Health Programme in Thiruvananthapuram and Thrissur districts. Of this, only ₹ 44.37 lakh was spent and the balance of ₹ 23.42 lakh remained unspent in the Treasury Savings Bank Accounts since 2008-09.

Implementation

Mental health care facilities were to be provided in consonance with the provisions of the MHA 1987 and rules framed thereunder and also with the objectives set forth in the Mental Health Policy, 2000. The implementation of various activities/programmes during the period 2005-2010 is discussed below:

Epidemiological survey

The National Human Rights Commission (NHRC) recommended (April 2009) that the State should conduct an epidemiological survey to identify mentally ill persons and draw up a strategy for setting up of new hospitals, for improving facilities for treatment, for teaching, training and research, etc. The Mental Health Policy envisaged a system to identify the mentally ill patients nature of their illness and the mental health care facilities available in the State. The State had not conducted any survey on the suggested lines and had also not developed any system to identify mentally ill patients as of October 2010. The Secretary, SMHA stated (November 2010) that action had been initiated to conduct such a survey.

Mental Health Act

The Central Government notified the State Mental Health Rules in 1990 for all the States. Sub-section (2) of Section 94 of the Act provides that the State Government with the approval of the Central Government shall make rules for carrying out the provisions of the Act. The State Government revised the rules in 2005 and forwarded them to GOI for approval. The revised rules had not been approved as of August 2010.

The provisions of the Act deal with mentally ill persons in psychiatric hospitals/nursing homes. The Act/Rules do not prescribe any qualification nor have any provision to regulate the practice of clinical psychologists, counsellors and psychiatric social workers who also have a significant role in mental health care. The Secretary, SMHA stated (November 2010) that they had requested the expert team constituted by GOI for amending the Mental Health Act to include this aspect also in the same.

Role of State Mental Health Authority

The SMHA has to advise the State Government on all matters relating to mental health. During 2005-2010, the SMHA sent proposals for starting Diploma Course in Psychiatric Nursing in MHC, Thiruvananthapuram; setting up rehabilitation centres at the district level under District Panchayats; and for additional staff for starting inpatient treatment in the new psychiatric ward of MCH Hospital, Thiruvananthapuram. However, Government had not acted on any of these proposals (August 2010).

Mental health services include, in addition to psychiatric hospitals and nursing homes, observation wards, day care centres, inpatient treatment in General Hospitals, ambulatory treatment facilities, etc. GOI directed (May 2008) the Secretary, SMHA to send a list of such services to the Director General of Health Services for perusal of the Central Mental Health Authority. The SMHA had, however, not sent the list as of June 2010. The Secretary, SMHA stated (November 2010) that DHS had directed the District Medical Officers to prepare a list of such facilities.

The SMHA is the licensing authority under the Act. During 2005-10, 26 applications were received by SMHA from psychiatric institutions for grant of licence. Prior to 2005, 113 applications were received and these were pending for issue of licences. As of March 2010, SMHA neither granted nor refused any licence as per the provisions of the Act. The Secretary, SMHA replied (June 2010) that licensing was not introduced because provision of SMHR 1990 regarding minimum facilities required for running psychiatric hospitals were very stringent and very difficult to follow. Thus the psychiatric institutions were functioning without licence and hence were illegal under the provisions of the Act. The Secretary, SMHA stated (November 2010) that the licensing procedure would be completed within three months.

Infrastructural facilities—Buildings

As part of integrating mental health services to general health services, construction of new additional psychiatric blocks were taken up using the Central funds received for upgrading the MHCs and strengthening the psychiatric wards of MCHs. The table below indicates the details of buildings constructed using Central funds, expenditure incurred, the present status of construction and reasons for their non-occupation:

TABLE 1.4: STATUS OF BUILDINGS CONSTRUCTED USING CENTRAL FUNDS

(₹ in lakh)

Name of Institution	Description	Details of Central funds received		Expenditure	Present Status (as of August 2010)/ Reason for non-occupation
		Year	Amount		
(1)	(2)	(3)	(4)	(5)	(6)
MCH, Alappuzha	New double storied Building for outpatients	March 2007	30.68	5.23	Column work for the ground floor alone was completed
MCH, Kottayam	Building for academic activities	December 2007	45.20	27.00	Furniture and Equipment were not provided
MCH, Kozhikode*	Construction of psychiatric ward	November 2004	9.70	36.02	Shortage of staff
MHC, Kozhikode	Ward 3	October 2005	24.00	16.23	Electrical connection not provided
	Ward 4	October 2005	43.00	32.33	Electrical connection not provided
	Additional Female Ward 5	October 2005	19.00	34.47	Electrical connection not provided
	Clinical Laboratory, EEG+ECT room	October 2005	8.00	22.23	Electrical connection not provided

(*Under the 25 per cent Central Assistance Scheme, ₹ 26.32 lakh met by State Government)

(1)	(2)	(3)	(4)	(5)	(6)
	Construction of a new building to accommodate Medical Officer, Nursing Superintendents, etc.	October 2005	42.00	22.33	Work not started
MHC, Thiruvananthapuram	De-addiction Centre	October 2005	150.00	105.00	Work not completed
	Female Ward	October 2005	100.00	Nil	Work not yet started
MHC, Thrissur	De-addiction Ward	October 2005	10.50	11.52	Shortage of staff
	Female Ward (Sick Ward)	October 2005	8.40	8.52	Shortage of staff

Source: Details furnished by MHCs and MCHs.

Except for the civil works of MCH, Alappuzha which was awarded to Nirmithi Kendra, all the remaining works were entrusted with Public Works Department (PWD) as deposit works. Audit scrutiny revealed the following:

- In MHC, Kozhikode, due to delay in completion of the work, the percentage of cost over-run in respect of the clinical laboratory and the Electro Encephalogram and Electro-Convulsive Therapy (EEG+ECT) room was 178 per cent (from ₹ 8 lakh to ₹ 22.23 lakh). In respect of the additional female ward it was 81 per cent (from ₹ 19 lakh to ₹ 34.47 lakh). The PWD attributed the delay to failure of MHC to hand over hindrance-free site, revision of estimate due to change in schedule of rates and delay in finalisation and execution of agreement with the contractors.

- The PWD was still (August 2010) to take up the work of construction of the female ward for MHC, Thiruvananthapuram due to delay in handing over the site, cutting and removal of trees, etc. The de-addiction ward started during August 2006 at a cost of ₹ 1.50 crore had been completed only partially.
- The Superintendent, MCH, Alappuzha released (July 2008) ₹ 14.50 lakh to Nirmithi Kendra for the construction of a building for outpatients. Joint verification by the audit team and the Superintendent, MCH, Alappuzha revealed that though the work was started in July 2008, it remained at a standstill after column work of the ground floor had been done at a cost of ₹ 5.23 lakh. In April 2010, the MCH proposed to Government to transfer the work from Nirmithi Kendra to PWD. Audit observed that lack of proper co-ordination between the MCH and Nirmithi Kendra was the main reason for the delay in executing the work.
- In MHC, Thrissur, two buildings completed in January 2010 were lying unutilised due to shortage of staff.

Thus the buildings constructed using Central funds could not be put to beneficial use for patients due to inordinate delay in completion of the buildings despite availability of sufficient funds. The Secretary, SMHA stated (November 2010) that steps would be taken to complete the buildings and make them useful.

It was also seen in audit that psychiatric wards (for both male and female) with a Behavioural Intensive Care Unit constructed in March 2005 (cost: ₹ 10 lakh) at District Hospital, Kollam were not put into use due to defective construction (viz. a deep crack in the roof of female ward; lavatory side of the female ward sinking two feet down) and were being used as store rooms. A joint verification revealed that medicines and gloves stored in these rooms had become damp as the roof of the building was leaking heavily. The Secretary, SMHA stated (November 2010) that steps would be taken to make the unit functional.

Bed strength and occupancy

Bed strength and average occupancy per day during 2005-10 in MHCs (Kozhikode, Thiruvananthapuram, and Thrissur) revealed that the percentage of occupancy ranged between 102 and 118. The excess occupancy was due to overstayal of improved patients, heavy admission of relapsed cases, non-utilisation of new wards due to shortage of staff and non-completion of works, etc. Overstayal of patients was due to non-availability of adequate

rehabilitation centres, non-availability of proper address of the patients who were admitted by court orders, non-acceptance of recovered patients by their families etc.

The three MCHs had a total bed strength of 154*. The average bed occupancy per day during 2005-10 was 42, 40 and 18 in MCHs, Thiruvananthapuram, Kozhikode and Thrissur respectively. In MCHs, Thiruvananthapuram and MCH, Kozhikode even though the bed strength of psychiatric wings was increased by 14 and 24 respectively by constructing (2002) additional units, these units had not started functioning as of August 2010 for want of paramedical staff. The Secretary, SMHA stated (November 2010) that steps would be taken to make the buildings functional.

Functioning of Psychiatric units of District and Taluk Headquarters Hospitals

In the affidavit filed (June 2002) by the State Government before the Supreme Court it was stated that provision had been made in the budget (2002-03) for establishing psychiatry units in all district hospitals and that in the next phase psychiatric units would be established in Taluk Headquarters hospitals as well. There were 14 district hospitals and 63 Taluk Headquarters (THQ) hospitals in the State. The DHS, Thiruvananthapuram accorded (December 2003 and October 2004) sanctions for starting psychiatric units in nine† THQ hospitals by utilising the available facilities and manpower. However, the department started psychiatric units only in four‡ (out of nine) THQ hospitals during 2005-06. Except for a psychiatrist, Government did not sanction the paramedical staff in the four hospitals so far (August 2010). While no unit was started in other THQ hospitals such as Karunagappally, Mannarkad, Muvattupuzha, Neyyattinkara and Ottappalam, one unit started (2005) at Nedumangad was closed down from April 2010 for want of psychiatrists. Out of a total 63 THQ hospitals, psychiatric units were yet to be started in 59 such hospitals. The action of the Government in not starting adequate number of psychiatric units with supporting staff was against the affidavit filed before the Supreme Court. The Secretary, SMHA stated (November 2010) that psychiatry units would be started in THQ hospitals subject to availability of psychiatrists.

* Kozhikode: 71, Thiruvananthapuram: 43 and Thrissur: 40.

† Chirayinkil, Karunagappally, Mannarkad, Mavelikara, Muvattupuzha, Nedumangad, Neyyattinkara, Ottappalam, Tirur.

‡ Chirayinkil, Mavelikara, Nedumangad, Tirur.

Behavioural Intensive Care Units

A full-fledged Behavioural Intensive Care Unit (BICU) to accommodate mentally ill patients with violent behaviour was functioning in MHC, Thiruvananthapuram from November 2006. Two buildings were constructed in MHC, Thrissur and Kozhikode (2005-07) at a cost of ₹ 8.29 lakh and ₹ 12 lakh respectively for setting up of BICUs. However, these units were not started due to non-availability of paramedical staff. The Secretary, SMHA stated (November 2010) that steps would be taken to make the units functional.

Admission and Treatment of mentally wandering/under-trial ill patients

On reception orders* passed by the respective Magistrates under Section 24 of the MHA 1987, 2023 wandering mentally ill persons and seven under-trials were admitted (2005-09) and treated in the three MHCs† test-checked. The MHC, Thiruvananthapuram made special efforts to send back all the 714 wandering patients after treatment to their respective homes. In MHC, Kozhikode, 396 patients were sent back while MHC, Thrissur could send back only five patients (August 2010). The Secretary, SMHA stated (November 2010) that maximum efforts were being made to trace the addresses of the wandering patients.

Institute of Mental Health and Neurosciences

The Institute of Mental Health and Neuro Sciences (IMHANS) was constituted in June 1983 as a society registered under the Societies Registration Act, 1860. The control, administration and management of the society of the IMHANS was vested in the Governing Body consisting of the Minister of Health as Chairman and Government Officers‡ as members. During the period 2005-10, the Institute had taken up the District Mental Health Programme (DMHP) for Wayanad and Community Mental Health Programme (CMHP) under the National Rural Health Mission for Kasargode, Malappuram and Kozhikode on the lines of DMHP. The Institute also monitored the rehabilitation centre for improved patients of the MHC, Kozhikode. The implementation of the DMHP/CMHP in four districts (Kasargode, Kozhikode, Malappuram and Wayanad) by IMHANS helped to reduce the workload of MHC, Kozhikode as evidenced by the reduction (22.61 per cent) in intake of inpatients at MHC, Kozhikode from

* An order authorizing the detention of a patient in a psychiatric hospital.

† Kozhikode:1022, Thiruvananthapuram:721 (including seven under-trials), Thrissur:287.

‡ Secretary, Health Department as Vice-Chairman, Secretaries of Departments of Finance, Planning, etc., as members.

31802 (2005) to 24610 (2009). According to the cost-effect analysis of the MHC, Kozhikode made by the Institute during the year 2009, there was saving of 26.15 per cent in expenditure on diet, medicine and drugs due to reduction in intake of inpatients.

Occupational Therapy

Occupational therapy is the application of goal directed, purposeful activity in the assessment and treatment of individuals with psychological, physical or developmental disabilities. In MHCs, Thiruvananthapuram and Thrissur, 63 and 45 improved patients respectively were engaged daily during 2005-10 in various occupational therapy units such as soap making, cover making, stitching, bakery, candle making, etc. In MHC, Kozhikode, no creative and functional occupational therapy unit was functioning, although there was a post of occupational therapist. The Secretary, SMHA stated (November 2010) that steps would be taken to start occupational therapy units in MHC, Kozhikode.

Rehabilitation

Rehabilitation is one of the important components in the mental health care facility. As per the Mental Health Policy, the rehabilitation centres were to be centered around standard referral institutions. The Mental Health Policy also envisaged establishment of day care centres at the block and district levels. There were 14 districts and 152 blocks in the State. The Social Welfare Department which had the responsibility of rehabilitation of chronically mentally ill patients under the Persons with Disabilities (PWD) Act 1995, had only six Asha Bhavans*, under its control. Besides two rehabilitation centres under the District Panchayat, Thiruvananthapuram and five centres at Block level were functioning in the State. The Secretary, SMHA had sent (September 2007) proposals to the State Government for establishment of rehabilitation centres in the remaining 13 districts under the control of the respective District Panchayats, the sanction for which is pending with the Government (August 2010).

Functioning of NGOs/Private Institutions getting financial assistance from Central/State Government

The Government/SMHA did not have the details of the total number of psychiatric hospitals/nursing homes, de-addiction centres, rehabilitation centres, care homes, day care homes, etc., functioning in the State. Independent scrutiny

* Asha Bhavans are rehabilitation homes under the Social Welfare Department to accommodate the mentally cured patients discharged from MHCs.

by Audit revealed that 17 de-addiction centres and three rehabilitation centres for mentally ill patients in Kerala were getting grants-in-aid from the Ministry of Social Justice and Empowerment from 2005-06 onwards. Test-check of seven institutions (five de-addiction centres and two rehabilitation centres) under five out of the eight test-checked NGOs revealed that minimum facilities such as manpower, support facilities like Electro Convulsive Therapy, recreational activities, etc., required under Rule 22 of the SMHR were not available in the five de-addiction centres. It was also seen that only three institutions (Bodhi and Karma under Abhaya, Thiruvananthapuram and St. Josephs's Bhavan, Thrissur) were registered with the Social Welfare Department under Section 51 of the Persons with Disabilities Act, 1995. Further, all the seven institutions had not got licenses under Section 6 of MHA, 1987. However, all these institutions received grant-in-aid of ₹ 2.32 crore during 2005-10 from GOI.

Human Resources Management

Manpower

According to Rule 22 of the State Mental Health Rules, 1990, there should be one psychiatrist and one clinical psychologist/social worker for a 10-bedded hospital or nursing home. In addition, one staff nurse and one attender was to be provided for every three and five patients respectively.

The shortage of manpower in various categories in the three MHCs ranged between 64 and 94 per cent. The shortfall was due to lack of qualified psychiatrists, clinical psychologists, psychiatric nurses and social workers. The Secretary, SMHA stated (November 2010) that a proposal to create necessary posts in a uniform pattern in all the three MHCs was under consideration of the Government.

In District/Taluk Headquarters hospitals test-checked, there were shortages of personnel in all posts except psychiatrist (except in District Hospital, Ernakulam where there was excess manpower of psychiatrist and clinical psychologist). Thus, due to shortage of staff, the facilities contemplated under the Act for quality health care could not be provided. Details of shortage of staff are given in Appendix III.

The Secretary SMHA stated (July 2010) that the annual turnout from all the Medical Colleges was nine psychiatrists with postgraduate degree (MD), seven psychiatrists with Diplomas in National Board Examination and five psychiatrists with Diplomas in Psychiatric Medicine (DPM). The annual turnout of qualified nurses in psychiatry from two Medical Colleges and 18 Nursing Schools was only 495. To overcome the heavy shortage of qualified psychiatrists, the SMHA proposed (September 2009) to Government that a postgraduate course in psychiatry should be made compulsory for any private organization seeking permission to start new medical colleges.

While conducting a study on the quality of mental health care, NHRC also pointed (2008) the need to start postgraduate courses like DPM and MD in all the MHCs, to change the staffing pattern depending on the number of beds, to organize in-service training programmes, to identify one mental hospital in each State or region as a training centre, etc. However, the recommendations were not implemented (July 2010). The Secretary, SMHA stated (November 2010) that a proposal for a uniform pattern of staff patient-ratio in all the three MHCs was pending with Government, in-service training was conducted in all the three MHCs and the Institute of Mental Health and Neurosciences, Kozhikode had been identified for upgrading as a centre of excellence and would function as a training centre.

Training of staff

The National Human Rights Commission in its Report (November 2005) on MHC Thiruvananthapuram reiterated the need for Psychiatric Social Workers to undergo a two-year training in psychiatric social work at the National Institute of Mental Health and Neurosciences, Bangalore or at Central Institute of Psychiatry or at Ranchi Institute of Psychiatry and Allied Sciences. This suggestion had not been favourably considered by Government. NHRC also observed that none of the nurses working in the MHC was qualified in psychiatry. Audit scrutiny revealed that the position in the other two MHCs (Thrissur and Kozhikode) was also not different. Presently, the general nurses were being imparted in-house training in psychiatry for a period of 15 to 21 days annually in Thiruvananthapuram. In Thrissur, no training was given in 2005-06 and 2009-10, whereas only 12, 6 and 29 general nurses were trained in 2006-07, 2007-08 and 2008-09 respectively. In Kozhikode, training was given to 15 nurses each in 2005-06 and 2006-07, 27 in 2008-09 and 20 in 2009-10. No training was given in 2007-08. The Secretary, SMHA stated (November 2010) that steps would be taken to impart in-service training to a maximum number of paramedical staff.

MONITORING

Mental Health Centres

As per the directions of the Kerala High Court (January 1998), a monitoring committee with District Judge as Chairman and two other members was functioning in all the three MHCs. The Committee met every quarter and reported directly to the High Court. The decisions taken in the meetings were minuted and follow-up action taken promptly.

Inspection

Section 13 of the Act requires that an inspecting officer may, at any time enter and inspect any psychiatric hospitals/nursing homes and require the production of any records and interview in private any patient receiving treatment. Government appointed in January 2003 and October 2009, four inspectors each in all the 14 districts to discharge the functions and duties contemplated under the Act. However, the inspectors could not conduct inspection of psychiatric hospitals/nursing homes except in five institutions which were inspected based on court orders. The Secretary, SMHA stated (June 2010) that non-issue of licences was the reason for non-compliance of the provisions of Section 13 of the Act. The results of inspection of these five institutions were not made available to Audit and consequently, the penal action, if any, taken under Section 82 of the Act, could not be verified.

Section 37 of the Act stipulates that the State Government was to appoint Board of Visitors, consisting of not less than five visitors of whom one should be a medical officer, preferably a psychiatrist and two social workers, for every psychiatric hospital and every psychiatric nursing home. Section 38 of the Act requires the Board of Visitors to make a verification of every part of the psychiatric hospitals and nursing homes in respect of which they have been appointed. However, the Boards of Visitors were appointed for the three Government MHCs only. No Board of Visitors was appointed for private psychiatric hospital/nursing home. The Secretary, SMHA stated (November 2010) that the Boards of Visitors were not appointed due to delay in the licencing process. Hence, Government could not ensure that human rights contemplated under Section 81 of MHA are not violated in the case of inmates of these private psychiatric institutions.

Protection of human rights

Section 81 of the MHA Act provides for protection of human rights of mentally ill persons. The NHRC in its Report (2008) on 'Quality of Mental Health Care', *inter alia*, recommended that (i) each hospital should have a medical records section headed by an officer trained in handling of medical records. If possible, the file retrieval system should be computerized, (ii) there should be a separate estate department for preservation of and maintenance of the estates, lands, properties and infrastructure of the hospital, (iii) there should be better co-ordination between the Health Department and Social Welfare Department and for this NHRC suggested that a member from the Social Welfare Department could be a member of the SMHA and a member from the Health Department could be a member of the State Co-ordination Committee formed under the Persons with Disabilities Act.

The Secretary, SMHA stated (November 2010) that computerisation of medical records in MHC, Thiruvananthapuram has been completed and steps would be taken to provide the facility in the other two MHCs also. The remaining two recommendations had not been implemented (November 2010).

CONCLUSION

The State Government had not formulated a mental health plan to implement the objectives envisaged in the Mental Health Policy, 2000. About 50 per cent of the Central funds received for providing additional facilities to patients in Mental Health Centres and Psychiatric Wards of Medical College Hospitals remained unspent. The State Government did not conduct any epidemiological survey to identify mentally ill persons in the State as recommended by the National Human Rights Commission. The State Mental Health Authority did not issue licences to 26 applicants who applied for licence during 2005-10 to start psychiatric institutions and psychiatric nursing homes in the State, which resulted in functioning of these institutions without valid licences. The shortage of manpower in the three Government Mental Health Centres ranged between 64 and 94 per cent. Inspections of the psychiatric hospitals/nursing homes were not carried out by the Inspectors. No Boards of Visitors were appointed for private psychiatric hospitals and nursing homes. The review revealed good performance of IMHANS in the field of rehabilitation of mentally ill patients and that of the three Government Mental Health Centres in admission, treatment and discharge of wandering/under-trial patients and the monitoring mechanism instituted at these Centres.

RECOMMENDATIONS

- Government should formulate a Mental Health Plan to achieve the objectives of the Mental Health Policy.
- Government should consider conducting an epidemiological survey to identify mentally ill persons in the State as recommended by National Human Rights Commission.
- Government should ensure that the psychiatric institutions function with the minimum facilities required under the Act.
- Government should initiate steps to amend the Act/Rules to prescribe qualifications and to regulate the practice of clinical psychologists, counsellors and psychiatric social workers.
- Government should provide adequate staff in the Mental Health Centres and peripheral institutions.

- Government should foster effective co-ordination between the Health and Social Welfare Departments to address the issue of rehabilitation of mentally ill/cured patients.
- The monitoring mechanism on the functioning of private psychiatry institutions should be strengthened.

The above points were referred to Government in September 2010, reply had not been received (November 2010).

[Audit Paragraph 1.1 contained in the Report of C&AG of India for the year ended 31 March 2010 (Civil).]

Notes furnished by Government on the above audit paragraph is included as Appendix II.

Regarding the audit paragraph the Committee criticised the slothful attitude of the department in not taking any steps in formulating a master plan even after the Accountant General's report. The Additional Secretary, Health and Family Welfare Department admitted that though a master plan had not been formulated, all effective measures were being taken to materialize the proposals in the State Mental Health Policy. The witness added that District Mental Health Programmes and Community Mental Health Programmes were implemented in all districts. As a part of it facilities which were formerly available only in the Medical Colleges, like child and adolescent clinics and geriatric clinics, were made available at district level.

2. The Secretary, State Mental Health Authority informed that the audit remarks were about the policy formulated in the year 2000 and it had been revised in 2013 and steps were initiated for formulating the action plan accordingly. He continued that all the measures had been taken to strengthen the psychiatric units functioning in all district hospitals and 13 Taluk Hospitals.

3. The Committee directed the Health and family Welfare Department to submit the revised Mental Health Policy to every members of the Committee.

4. The Committee asked whether the progress of implementation had been reviewed. Then the witness, Secretary, State Mental Health Authority deposed that though the State Government had not conducted any review, all activities are being carried out as envisaged in the Mental Health Policy. The Committee was not satisfied with the reply that no official review had been conducted and remarked that without reviewing the merits and demerits, the policy could not be evaluated.

5. The Committee commented that Mental Health Policy 2013 was not an alternative for State Master Plan. In fact master plan is a time schedule to attain objectives of the policy and review could be conducted on the basis of master plan only. It urged the Health and Family Welfare Department to formulate a Mental Health Plan at the earliest.

6. The Committee enquired about the present status of utilisation of Central fund referred by Audit. The Additional Secretary, Health and Family Welfare Department informed that it was provided for the construction and strengthening of psychiatric departments in Medical Colleges and Mental Health Centres.

7. The Witness submitted that in Alappuzha Medical College, out of ₹ 30.68 lakh allotted, a building was constructed expending ₹ 27 lakh and handed over to Psychiatry Department and ₹ 3.68 lakh left unspent. In the Kottayam Medical College out of ₹ 45.2 lakh, a block was constructed for strengthening the Psychiatry Department incurring ₹ 27 lakh in which Child observation room, Nursing Station, Psychology lab, Research room, Library, Examination hall for P.G. Students, Doctor's room etc. have been functioning. Another ₹ 18.2 lakh was utilised to purchase furniture and equipments and ₹ 3,452 only remained unspent. In Kozhikode Medical College the Psychiatry ward constructed utilising the fund has started functioning and an amount of ₹ 78,428 only was left unspent.

8. In Thiruvananthapuram Medical College, out of ₹ 150 lakh, a de-addiction block was constructed expending ₹ 150 lakh as a part of the programme. When the Committee asked why the construction of a modern female ward was not yet started, the Additional Secretary, Health and Family Welfare Department replied that the delay was due to the protest of the environmentalists against the felling of a tree from the site and the problem had been resolved in 2012. But by that time estimate of ₹ 70 lakh was escalated to ₹ 390 lakh and the fund became insufficient. The witness added that out of the allotted fund of ₹ 1 crore, ₹ 70 lakh had been given to Public Works Department and ₹ 30 lakh has been set aside as tender excess. The proposal has been submitted for allotment of additional amount in the budget for the year 2014-15.

9. The witness, Additional Secretary, Health and Family Welfare Department continued that one O.P. block with extension, Sick Ward, De-addiction Ward, Central Library, Electrical maintenance of the existing Ward etc. were completed utilising the central fund provided for the infrastructure development of the Mental Health Centre, Thrissur and only ₹ 23,832 left unspent.

10. Then the Committee invited the attention of the witness towards the idling of a building at Thrissur Mental Health Centre in which mental patients were supposed to be accommodated. The Witness, Director of Health Services submitted that it remain unusable since the design of building was not in accordance with the requirements of a hospital building. She added that, this building could not be used to accommodate mentally ill patients since there was a high probability of breakout or suicide in a low ceiling building, therefore this building could better be used for library or office room.

11. The Committee was at a loss to note that the authorities of the Mental Health Centre, Thrissur came to realize that the building constructed for the centre could not be utilised for the purpose for which it was constructed, only after the completion of the building. The Committee remarked that the officials of the Health and Family Welfare Department could not wash their hands off simply by imputing the fault with the Public Works Department. The work had not been monitored and the bills were settled without proper verification. The Committee evaluated the whole deed as infructuous and directed that Health and Family Welfare Department must be vigilant in avoiding such wastage of public money. Also it suggested that the building constructed in Thrissur Mental Health Centre should be made usable for such and such other purpose at the earliest.

12. When the Committee sought the details of the construction activities at Kozhikode Mental Health Centre, the Witness, Additional Secretary, Health and Family Welfare Department replied that an additional block for women was constructed beside the existing female block utilising an amount of ₹ 34.46 lakh. An additional block near men's ward No. 4 was constructed using an amount of ₹ 81.62 lakh, ward No. 3 using an amount of ₹ 41.06 lakh and an amount of ₹ 78,428 left unspent.

13. To a query of the Committee, the Secretary, State Mental Health Authority submitted that Government of India granted fund for the implementation of District Mental Health programme in Thiruvananthapuram and Thrissur. The programme started in Thiruvananthapuram in 1999 and in Thrissur in 2000 State Government had taken over the programme after the expiry of the term of financial assistance of Government of India. Though the fund was agreed to be realised in 5 instalments, the last instalment was released only in the year 2009. The Witness continued that being pilot project there was some sort of confusion at the initial stage of implementation but later on all the problems were rectified and at present no fund was kept as unutilised.

14. To a query of the Committee regarding the Awareness Programme, the Secretary, State Mental Health Authority, submitted that the District Mental Health Programme had 3 components viz., (1) Out reach clinic, (2) Training of Medical Officers and Paramedical staff, (3) Public Awareness Programme.

15. The Public Awareness Programme was envisaged to reduce the present social stigma about mental illness. As part of this, Panchayat members, Policemen, Advocates, Asha workers, Anganwadi workers and general public were given awareness.

16. When the Committee asked whether any liaisoning was being conducted with Public Works Department to mitigate the delay in construction work in the light of previous experience, the Director of Health Services submitted that meetings with concerned engineers in the Public Works Department from all districts were conducted to review the pending works and other activities periodically.

17. To a query of the Committee the Secretary, State Mental Health Authority submitted that on the assumption that conducting an Epidemiological Survey would be futile, State had not responded positively at the initial stage. But later on it was felt that, for the implementation of many projects such a survey would be indispensable. Hence a proposal for conducting survey in the districts of Kollam, Idukki, Palakkad, Wayanad and Kasargod had been submitted as a pilot project to Government of India through NRHM and sanction was accorded. Then he detailed the execution of the programme that the ASHA Workers were supposed to collect the primary data by filling up the proforma prepared in this regard after visiting individual houses and the primary data collected by ASHA Workers would be monitored by a team including Psychiatrists, Psychologists and Psychiatric Social Workers as a part of the District Mental Health Programme. The persons who were identified as abnormal through this process were referred to the clinic and examined by the team.

18. To a query of the Committee the Secretary, State Mental Health Authority submitted that the deadline given for the completion of the Epidemiological Survey was January 15th 2014. The Committee urged the department to furnish a report regarding the survey to it at the earliest.

19. The Committee wanted to know whether any vocational training centres were there for the cured patients who were deserted by their relatives.

20. The Secretary, State Mental Health Authority submitted that since the existing training centres were not sufficient. Taking into account of this also ₹ 20 crore was sanctioned in the State Budget to implement the Comprehensive Mental Health Programme.

21. The Committee was informed that the revised State Mental Health Rules has been implemented since 2012.

22. The Committee enquired about details of authorised mental hospitals and rehabilitation centres under the private sector. The witness, Secretary, SMHA submitted that such details were not available with the authority.

23. The Committee asked whether such institutions were given license. The Secretary, SMHA submitted that out of 200 applications received, inspections were conducted in 184 institutions and 38 were given license and another 17 were selected to issue license. 60 institutions, which failed to fulfill the criteria were intimated to rectify the defects and some of them responded positively and they would be issued with license after re-inspection. He supplemented that as per the prevailing Act Government Hospitals were not bound to comply with the provisions.

24. When the Committee wanted to know the details of the proposed Diploma Course in Psychiatric Nursing in Mental Health Centre, Thiruvananthapuram, the witness, Secretary, State Mental Health Authority apprised that the proposal was not approved by Government of India but an amount to the tune of ₹ 294 lakh has been sanctioned to the Medical College Hospital, Thiruvananthapuram with a view for the enhancement of the post of Psychiatrist and also to provide assistance for commencing M.Phil. Courses in Clinical Psychology and Psychiatric Social Worker and Diploma in Psychiatric Nursing. But no action had been initiated and ₹ 56 lakh released in this regard to the Principal, Medical College Hospital had been refunded. Then the Witness, Director of Health Services interfered to inform that in order to conduct courses as per the direction of RCI, additional posts need to be created and recently two posts were created in connection with this. Responsibility to start M.Phil. Courses rest with the Kerala Health University but the lack of initiative from the part of the Head of the Department slowed down the whole procedures. To a query of the Committee the Secretary, State Mental Health Authority, submitted that they were compelled to surrender the unutilized balance in response to the instruction of the Government of India that if fund left unutilized further amount would not be sanctioned. He was optimistic that the amount surrendered would be recouped. The Committee felt pity on the fact that the fund allotted to Thiruvananthapuram MCH had been refunded and remarked that the Health and Family Welfare Department should take scrupulous effort to get back the amount surrendered.

25. The Secretary, SMHA informed the Committee that sanction was accorded to start Diploma Course in Psychiatric Nursing in IMHANS, Kozhikode and ₹ 30 crore was allotted. Construction of a new building for this purpose was completed and the course could be started soon after the creation of required posts.

26. The Committee viewed with grave concern over the fact that dearth of professionals not only doctors but also other Mental Health Professionals like Clinical Psychologists, Psychiatric Social Worker, Psychiatric Nurse is a major problem in our State.

27. The Secretary, State Mental Health Authority submitted that Kerala has the distinction of the only state in which mental health programme has been introduced in all districts. As a part of it, counselling at schools, life-skill training, stress management etc. were started.

28. To a query of the Committee, the Secretary, State Mental Health Authority submitted that due to the awareness among people so many of them approach mental health centre for treatment. But the increase in the numbers in the data did not imply that there were more mentally sick people in our state than other states.

29. The Committee wanted to know the details of mental health programmes implemented in schools. The Director of Health Services submitted that in addition to women counsellors from Social Justice Department, JPHN posted for school health programme and personnel from community mental health programme conduct screening and counselling. Similarly, adolescent health clinics were started functioning in all district headquarters.

30. Regarding the audit paragraph, the Committee asked whether the buildings which were kept idle during Audit were made operational and also the current status of the work of the buildings noticed in the Table 1.4. The Secretary, State Mental Health Authority replied that every buildings were functioning and the work of all the buildings were completed except that of the Mental Health Hospital in Thiruvananthapuram.

31. To a query of the Committee regarding the facilities provided to the patients, the Secretary, State Mental Health Authority apprised that now the Mental Hospitals have closed wards to accommodate them. He submitted that under Section 19 of the Mental Health Act such patients should not be admitted for more than 90 days unless otherwise ordered by Court. So they would be discharged after 89 days. Even if nobody turn up to receive them, the hospital authorities would take them back to their respective addresses.

32. The Committee enquired about the low occupancy rate in Medical Colleges as compared to that of the Mental Health Centre. The Director of Medical Education submitted that the Audit Remarks were not based upon the rate in percentage, but on the rate per day. Also she admitted that in Medical College the wards were not set-up suitably to accommodate the mentally sick.

Then the Secretary, State Mental Health Authority interfered to inform that patients were admitted only with bystanders in Medical Colleges and they would be discharged after the course of treatment.

33. The Committee wanted a written explanation regarding the audit remarks and the DHS agreed to do so.

34. When the Committee asked the current status of manpower in Taluk Headquarters Hospitals, the Secretary, State Mental Health Authority, submitted that psychiatric units have been functioning in all District Hospitals and in 13 Taluk Headquarters Hospitals. Psychiatric Units were proposed to set-up in every Taluk Headquarters Hospitals subject to the availability of manpower.

35. The Committee decided to recommend to take immediate steps to start psychiatric units in all Taluk Hospitals as well as in the hospitals which were upgraded as District Hospitals.

36. To a query of the Committee, the Secretary, SMHA stated that Behavioural Intensive Care Units were functioning properly in 3 Mental Health Centres. In Thiruvananthapuram Medical College, a separate ward was constructed for the purpose and patients were being admitted there.

37. The Committee deplored over the condition that the Department is not furnishing the RMT Statement on the audit remarks even at the time of meeting. Moreover the officials present during the meeting could not answer the questions. So the Committee urged the Health and Family Welfare Department to furnish a detailed report regarding the audit paragraph at the earliest.

38. The witness, Secretary, State Mental Health Authority informed the Committee that the Institute of Mental Health and Neurosciences, Kozhikode was upgraded as Centre of Excellence and was granted with ₹ 30 crore under the Manpower Development Scheme of the National Mental Health Programme. He continued that even though the building construction was completed necessary posts were not created. Proposal has been submitted for the post of Professor for commencing Postgraduate Courses in Psychiatry before the Finance Department. The Committee decided to recommend that steps should be taken to operationalise the IMHANS at Kozhikode at the earliest and emphasized that necessary funds and posts must be sanctioned in a time-bound manner for the smooth functioning of IMHANS.

39. To a query of the Committee, the Secretary, State Mental Health Authority, submitted that occupational therapists work in each Mental Health Centre in the State. Then he detailed about the remarkable performance of IMHANS which was entrusted to conduct the rehabilitation centre at Kozhikode Mental Health Centre. The inhabitants of that centre could earn up to ₹ 4,000-₹ 5,000 per month. The Committee accepted the explanation.

40. The Committee noted the pathetic situation of patients who were not welcomed by their relatives after treatment and stressed the need to set-up a State Level Rehabilitation Centre with facilities for vocational education and work with the help of other agencies functioning under Government control and supervision.

41. The Director of Health Services submitted that Administrative Sanction for the Rehabilitation Centre had been granted and ₹ 20 crore was allotted in this year. Moreover it was decided to start one centre each for men and women in every District Headquarters with the help of Social Justice Department.

42. The Committee urged to know the details of rehabilitation centres established by Government. The Secretary, State Mental Health Authority submitted that, only two rehabilitation centres were functioning in the state under the Government control. One as a part of the Mangalapuram PHC in Pothencode Block Panchayath and another one in association with the Institute of Mental Health in Feroke Grama Panchayath.

43. The Committee viewed that the Government Employees entrusted with rehabilitation work would not be as compassionate as the voluntary agencies. So the Committee suggested to involve those agencies in the rehabilitation process under the supervision and control of the department.

44. When the Committee asked about the licensing of rehabilitation centres, the witness did not respond.

45. The Committee viewed it with serious concern over the irresponsible attitude in not furnishing the RMT statement on audit paragraphs in time and directed the department to furnish the detailed report to it at the earliest.

46. The Committee was informed that there were two well functioning care homes in Thiruvananthapuram, conducted by NGOs i.e. centre for male at Nellanad Panchayath by Sai Gramam and the centre for female at Abhaya. In those centres, the building and other infrastructure, maintenance etc. were carried out by District Panchayath and the running expenditure was met by Social Justice Department.

47. Then the Committee directed the Health and Family Welfare Department to collect a detailed report regarding the psychiatric hospitals/nursing homes, de-addiction centres, rehabilitation centres, care homes, day care homes etc. under the control of NGOs/Private authority which receive Government aid from the Social Justice Department and furnish the same to the Committee.

48. The Committee expressed its anguish over the media reports which revealed the reprehensible activities of some private agencies in this sector including sexual abuse. The Committee stressed the need for closing such unscrupulous private institutions which lack even adequate facilities. The Committee opined that the State Mental Health Authority has to be strengthened for proper monitoring of private institutions in this sector. It decided to recommend to enhance the staff strength of State Mental Health Authority.

49. The Committee wanted to know the details of mental health treatment in the Ayurvedic Sector. The Secretary, State Mental Health Authority submitted that Secretaries to LSGD and Home Departments were requested to collect the details of such institutions in the State.

50. To a query of the Committee, the Secretary, State Mental Health Authority submitted that a course in Mental Health is being conducted at Ayurveda Medical College, Kottakkal and also MD (Ayurveda) in Mental Health. The Committee directed the department to collect a comprehensive data base of all mental health treatment centres in various disciplines in the State.

51. The Secretary, State Mental Health Authority invited the attention of the Committee over a rule formulated by the Social Justice Department under the powers conferred under the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 (PWD Act) which provide that Psychiatric rehabilitation centres, care homes, day care centres etc. could be established under the certification of the Social Justice Department rather than obtaining license from Health Department under the Mental Health Act. It also provided to admit wandering lunatics in such centres up to 10 days which contradict the provisions of the Mental Health Act. All the institutions in the Mental Health Sector should work according to the provisions of the Mental Health Act and it should be made mandatory. Then the Committee directed the Health and Family Welfare Department to look into the matter and take appropriate decision.

52. To a query of the Committee, the Secretary, State Mental Health Authority submitted that, 808 Graduate Doctors and 816 Staff Nurses working under the Health Service were given training as a part of District Mental Health Programme.

53. The Secretary, State Mental Health Authority submitted that though a panel was published consisting 3 or 4 psychiatrists in each districts as Psychiatric Inspecting Officers to conduct inspections, most of them were retired from service. Proposal has been submitted to create a new panel. Some officers

were reluctant to participate in the programme citing that they were not bound to conduct inspection as per rule. So Deputy DMOs were ordered to conduct inspection and accordingly inspections in 184 institutions were completed.

54. The Committee condemned that the inspections as envisaged in the Mental Health Act were not being carried out properly. Hence it decided to recommend to take appropriate action in this regard and to appoint adequate number of inspectors at the earliest.

55. The Committee directed the department to submit the reply of audit paragraphs and the witness, Additional Secretary, Health Department assured to do so within one month.

56. The Committee concluded that State Mental Health Authority would be provided with enough fund to construct a new building for the Authority and it reiterated its earlier comment that the staff strength of State Mental Health Authority should be enhanced.

57. The Committee analysed that after the attachment of +1 and +2 classes to the schools serious issues were being reported. Academic competition among children cause mental stress which may result in serious psychological problems. So counselling and awareness programmes are a need of the hour which should be conducted under the auspices of the Mental Health Authority. So it emphasized the necessity of expanding District Mental Health Programme. It appreciated the activities of Dr. Chithra who conducted counselling sessions in schools etc. in Mararikulam Grama Panchayath. In this regard it was informed that large number of counselling centres were functioning throughout the state without any control. Since counselling centres were not covered under the Mental Health Act, their activities could not be supervised. Then the Committee directed the Health and Family Welfare Department to take up the matter with Central Government to make necessary amendments in the Act to make the registration of counselling centres mandatory.

Conclusion/Recommendation

58. The Committee chides the Health and Family Welfare Department for not formulating a master plan to implement the objectives as envisaged in the State Mental Health Policy, 2000 even after thirteen years. The Committee remarks that the State Mental Health Policy, 2013 is not an alternative to State Master Plans and directs the Health and Family Welfare Department to formulate a mental health plan at the earliest and also to furnish the revised Mental Health Policy to the members of the Committee.

59. The Committee notices that there is no effective mechanism to review the progress of implementation of the Mental Health Policy in our State. It is of the opinion that without reviewing the merits and demerits of a policy, it could not be evaluated. So the Committee directs the Health and Family Welfare Department to take necessary steps to evolve a methodology to review the programme.

60. The Committee was surprised to note that a building constructed for the Mental Health Centre, Thrissur was left idle as its construction is not favourable for accommodating lunatic patients. Intensifying the gravity the Health and Welfare Department had settled the bills even without verifying the work. The Committee remarks that the officials of the Health and Family Welfare Department are also equally responsible as the PWD for this futile work. The Committee directs the Health and Family Welfare Department to be more vigilant in avoiding such wastage of public money and suggests that the building should be made use of for other productive purposes at the earliest.

61. When informed that the epidemiological survey was envisaged to be complete in January 2014 itself, the Committee urges the Health and Family Welfare Department to furnish a report regarding the epidemiological survey at the earliest.

62. The Committee observes that an amount of ₹ 56 lakh released to the Medical College Hospital, Thiruvananthapuram for enhancing the number of posts of psychiatrist and also for commencing M.Phil. Courses in Clinical Psychology and Psychiatric Social Worker and the Diploma Course in Psychiatric Nursing was refunded without initiating any step. It suggests that the Health and Family Welfare Department should take meticulous effort to get the amount to materialise the proposals at the earliest.

63. The Committee recommends to take necessary steps to start psychiatric units in all Taluk Headquarters Hospitals and the hospitals upgraded as District Hospitals.

64. The Committee recommends that measures should be taken to operationalise the IMHANS at Kozhikode at the earliest. Necessary fund and posts be sanctioned for its smooth functioning.

65. The Committee was anxious about the plight of the lunatics. It remarks that the person once treated for psychic disorders will be viewed with suspicious eyes throughout their life. The Committee feels pity over the fact that many patients were left abandoned at the place of treatment even after they were cured. It emphasizes the need of a state level rehabilitation centre under the control and supervision of the Health and Family Welfare Department

with facilities for work as well as vocational training. The Committee is of the opinion that attending mental patients requires much dedication and should not be carried out as part of one's official duty. Hence it suggests to incorporate voluntary agencies in the rehabilitation of mental patients.

66. The Committee directs the Health and Family Welfare Department to collect and furnish detailed report regarding the Psychiatric hospitals/nursing homes, de-addiction centres, rehabilitation centres, care homes, day care homes etc. under the control of Non Governmental Organizations or Private agencies functioning with the aid from Social Justice Department.

67. Considering the Media reports regarding the reprehensible activities of certain private agencies including sexual abuse, the Committee demands for closing private institutions lacking adequate facilities. It directs that State Mental Health Authority has to monitor such institutions in this sector. The Committee recommends that the Health and Family Welfare Department should take necessary steps to compile a comprehensive database of all mental health treatment centres in various disciplines in the state.

68. When informed that in our state rehabilitation centre, care homes, day care homes etc. for lunatics are being established with the certification of Social Justice Department under the PWD Act [Persons With Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995], the Committee opines that there should be a consensus between the Social Justice and Health and Family Welfare Departments in this regard and license for such institutions should be issued under the provisions of Mental Health Act by the Health and Family Welfare Department. It directs the department to take up the matter with Government of India to resolve the contradiction in the provisions in the Mental Health Act and PWD Act regarding the admission of wandering lunatics in such centres.

69. The Committee strongly recommends to take appropriate action to conduct inspections as envisaged in the Mental Health Act and to appoint adequate number of inspectors, at the earliest.

70. The Committee directs the Health and Family Welfare Department that sufficient fund should be provided to construct a new building for State Mental Health Authority. It also recommends to take necessary steps to enhance the staff strength of State Mental Health Authority.

71. The Committee analyses that in Higher Secondary Schools serious psychological issues are reported among children as a result of the increased use of mobile phones and internet as well as the mental stress due to academic competition which necessitated setting up of counselling centres in schools.

Hence the Committee emphasises the necessity of expanding mental health programme. It observes that many unauthorized counselling centres are functioning throughout the State. So the Committee directs the Health and Family Welfare Department to take up the matter with Central Government to make necessary amendments in the Mental Health Act to make the registration of counselling centres mandatory.

72. The Committee expresses its dissatisfaction over the lackadaisical attitude of the Health and Family Welfare Department in not furnishing the Remedial Measures Taken Statement regarding the audit paragraphs even at the time of Committee meeting. It condemns the department for not complying the assurance given at the time of witness examination that notes would be furnished within one month. It reiterates its earlier demand to furnish the same within one month.

AUDIT PARAGRAPH

Computerisation in Regional Cancer Centre

Highlights

The Regional Cancer Centre, Thiruvananthapuram, a State Autonomous Body established in 1981, is a research institute providing facilities for cancer diagnosis, treatment, palliation and rehabilitation to the population of the State of Kerala and the adjoining parts of Tamil Nadu and Karnataka. Computerisation of the vital activities of the institution, which began in a small way in 1991, has evolved to Hospital Information System with the capability of providing telemedicine services. While a review on functioning of the computerisation project revealed commendable performance of computerised registration and Cancer Epidemiology and Clinical Research Departments, it also brought to light various shortfalls/deficiencies, viz., ineffective organizational and management controls, inadequate planning at various levels, lack of proper monitoring mechanism during implementation, ineffective internal controls, etc. in other departments.

Lack of proper IT Planning and absence of IT Steering Committees led to isolated system development lacking focus in achieving the optimum results and underutilisation of software modules.

In the absence of User Requirement Specifications (URS) the extent to which the intended benefits of the computerisation were achieved could not be assessed.

The integrity of the system is at stake on account of data loss caused by deficiencies in system design.

Accounts of the institution over the years were not drawn up properly on account of system design deficiency.

The institution having the annual cash transaction above ₹ 40 crore is vulnerable to fraud on account of non-tallying of daily collection report.

Improper implementation of computerisation in nursing department resulted in ineligible payment of salary of ₹ 34.59 lakh.

The institution did not have adequate information security and password policies.

Lack of controls resulted in incorrect data capture, ineligible credit and availing of leave, etc.

Costs of avoidable manpower were ₹ 16.78 lakh in medical records and ₹ 9.58 lakh in stores departments.

In the absence of offsite storage, the soft assets of the institution are at risk of irreparable loss.

Introduction

The Regional Cancer Centre (RCC), Thiruvananthapuram, an autonomous body, was established in 1981 by the Government of Kerala with the financial assistance from the Government of India also. It is a comprehensive cancer care centre catering to the population of the State of Kerala and the adjoining parts of Tamil Nadu and Karnataka. The objectives of the institution are to provide facilities of modern treatment for cancer, to evolve cancer control programme and to provide necessary facilities for teaching undergraduates, postgraduates and paramedics. In addition to diagnosis and treatment of cancer, the institution undertakes ongoing research projects related to prevention and cure of cancer.

Organisational Structure

The Governing Body headed by the Chief Minister of the State is at the apex level. While the Executive Committee is headed by the Secretary to Government, Health and Family Welfare Department, the Director, RCC is the convener. There are 22 departments each functioning under a Head of the Department. The RCC has five peripheral nodal centres at Karunagapally, Kozhencherry, Kochi, Palakkad and Kannur.

Information System set-up

Computerisation began in the RCC in 1991 by computerising the activities of store, pharmacy, cytology lab, clinical laboratory and purchase departments. Capturing of clinical data of patients started during 1999-2000 followed by

computerisation of the activities of Administration and Accounts departments. The institution has following Information systems:

Office Management System (OMS): Office Management System, an administration and accounting package, which began as an in-house package was later outsourced to M/s Arackal Digital Solutions Ltd. The vendor, who was a former employee of the institution developed and handed over the source code free of cost to the institution. OMS included payroll, leave and service records processing and financial accounting. The system has been operational since January 2002.

Hospital Information System (HIS): 'OncoNet-Kerala' was a research project on telemedicine initiated by C-DAC* in collaboration with the RCC and ISRO†. The Department of Information Technology, Ministry of Communication and Information Technology, Government of India accorded sanction for the project in September 2003. It envisaged to integrate all other functions of the hospital management and had a financial outlay of ₹ 2.35 crore. While ₹ 1.79 crore was grant-in-aid from Government of India, contribution by ISRO was ₹ 36 lakh and contribution by RCC was ₹ 20 lakh. Government of Kerala incurred ₹ 54.81 lakh towards the purchase of hardware and software during 1990-91 to 2008-09 in addition to the above. The project envisaged providing telemedicine services by establishing connectivity with five nodal centres of RCC located in various parts of Kerala utilising the expertise of the RCC in the field of oncology. As part of the project, C-DAC developed a Hospital Information System specifically by name 'TEJHAS'‡, which has been put to use since January 2005.

The hardware includes five Xeon servers, eight P4 servers, 250 PCs, 80 thin clients, 110 printers, four IP cameras, six flat TVs, six Videoconferencing systems, six V-SAT§ and Sky IP¶ units, three telepathology/radiology, one router and 29 hubs/switches. The application server runs Oracle 10g. database on Enterprise Linux 3.0.

* Centre for Development of Advanced Computing, formerly ER & DCI, Thiruvananthapuram, is a Scientific Society of the Department of Information Technology, Ministry of Communications and Information Technology, Government of India.

† The Indian Space Research Organisation (ISRO), is the primary body for space research under the control of the Government of India, and one of the leading space research organizations in the world.

‡ Telemedicine Enabled Java Based Hospital Automation System.

§ A Very Small Aperture Terminal (V-SAT) is a two-way satellite ground station or a stabilized maritime V-SAT antenna with a dish antenna that is smaller than 3 metres. The majority of V-SAT antennas range from 75cm. to 1.2m.

¶ The SkyIP terminal provides a satellite communications solution based on the Internet Protocol (IP).

Audit objectives

The objectives of the information system review were to assess the extent of achievement of the objectives of computerisation by ascertaining whether:

- Effective organisational and management controls were in place to ensure safeguarding the business assets;
- Adequate internal and system controls were in place to ensure the achievement of intended results;
- Adequate security measures and business continuity planning were in place;
- Basic attributes of data/information like confidentiality, integrity, availability, reliability, compliance, etc., are maintained and
- The electronic system was successful in replacing the manual system.

SCOPE AND METHODOLOGY

Scope of audit

We evaluated the implementation of information system packages like HIS and OMS, performance of electronic recording of attendance, functioning of telemedicine project 'OncoNet-Kerala', management of IT assets, adequacy of human resources and internal control measures.

Audit methodology

Audit was conducted during February-May 2010. An entry conference was held with the Director of RCC on 3rd February, 2010. The audit team visited various Departments at RCC, Thiruvananthapuram and three out of five Nodal Centres of RCC for on the spot verification of the working of the system and held interview with end-users to assess the usefulness and user-friendliness of the software. Backup data in respect of clinical data, billing data and personnel data were analysed using CAATs[†]. The review was sent to Government on 4th October, 2010 and discussed in the exit conference on 22nd October, 2010.

Audit Criteria

Software Requirement Specification and Preliminary Design Document of Hospital Information System, FR & SR of Central Civil Services, Service Rules of the RCC and various administrative orders of the institution were relied upon.

* Karunagapally, Kochi and Palakkad.

† Computer Assisted Audit Techniques.

Acknowledgement

We would like to place on record our appreciation on management of the institution by a team of dedicated clinicians, nursing staff and other personnel in providing quality service in diagnosis, prevention and cure of cancer. Management of computerised registration, performance of Cancer Epidemiology and Clinical Research Department and outpatient clinic is praiseworthy. Clinicians are seen taking extra pain to consult nearly four times the number of patients expected of them. The telemedicine venture is found to be a pioneer step in catering to the population located in distant places. We would also like to place on record our sincere thanks for the co-operation extended by the Government of Kerala, the Director, other officers and staff, especially the IS Department of the Regional Cancer Centre, Thiruvananthapuram.

AUDIT FINDINGS

Management Direction and Planning

IT Planning

Information Technology planning provides a structured means of addressing the impact of technologies, including emerging technologies, on an organisation. Through the planning process, relevant technologies are identified and evaluated in the context of broader business goals and targets, on the basis of which the direction for the organisation can be established.

Absence of IT planning in the organization led to isolated system development lacking focus in achieving resource optimization. Hospital Information System (HIS) was not integrated with the financial and accounting software-Office Management System (OMS). The non-integration of these systems led to reconciliation issues, non-tallying of subsidiary accounts, duplication of work and underutilization of man and machine resources.

The Government stated (December 2010) that IT Plan would soon be formulated.

IT Steering and Monitoring Committees

IT Steering Committee would be responsible for the overall direction of IT. To be effective, the IT Steering Committee should draw its members from senior and middle management and all user departments within an organisation. Senior management's presence is significant since it gives the decisions made by the committee due importance and also ensures that IT is business driven and not technology driven.

Absence of IT Steering Committee led to non-implementation and non-utilisation of modules in five* out of 22 departments lacking focus in achieving the optimum results. The absence of IT monitoring committee resulted in ineffective/partial implementation of computerisation in seven† out of 22 departments. We noticed that shift roster of nursing staff were not entered into system, consultation modules were not utilised, discharge summaries were not entered into system, results of various investigations were not made available online to clinicians during consultations, etc.

All these indicate need for better direction in implementation. It has also led to duplication of work, underutilisation of man and machine resources and making the system open to human errors.

The Government stated (December 2010) that the IT Steering Committee would soon be constituted.

Status of Documentation

User Requirement Specifications (URS) and System Requirement Specifications (SRS)

Before taking up the computerization projects, the institution had not prepared and documented the User Requirement Specifications (URS). The development team had not prepared the System Requirement Specifications (SRS) and User Manual in respect of OMS. In case of HIS, although SRS and System Design Document (SDD) were prepared as an obligatory prerequisite for applying for the grant, these were not formally accepted by the institution. User manual prepared for HIS was never printed. But no URS was prepared and documented in case of HIS as well. There was no signing off of the projects in both the cases. There was collaboration among C-DAC, RCC and the Vikram Sarabhai Space Centre (VSSC) for the OncoNet-Kerala. However, the RCC did not enter into service level agreements/Memorandum of Understanding (MoU) with the C-DAC and VSSC for upholding of its legal rights, maintenance and future support.

In the absence of URS, we could not assess as to what extent the expectations of the users and the intended benefits of these projects could be achieved.

The Government stated (December 2010) that proper documentation would be ensured in the second phase of the OncoNet project.

Lack of obtaining user requirements resulting in ineffective implementation of telemedicine project

Telemedicine is the ability to provide interactive healthcare utilizing modern technology and telecommunications. Basically, Telemedicine allows patients to consult physicians live over video for immediate care or capture video/still

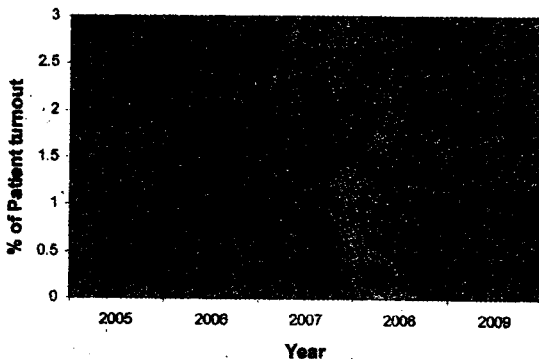
* Engineering, Consultation, Radiotherapy scheduling, Service ordering and scheduling and Sterile service.

† Nursing, Outpatient Clinics, Surgery, Stores, Purchase, Laboratory and Medical Records.

images and patient data are stored and sent to physicians for diagnosis and follow-up treatment at a later time. The prerequisite for an ideal telemedicine system includes peripheral sophistication such as hand-held general exam camera, electronic stethoscope, dermatology camera, retinal camera, electronic electrocardiogram, etc. for enhancing precision and complexity in examination.

OncoNet-Kerala project envisaged connectivity between RCC and its nodal centres at different parts of Kerala*. While the RCC supplied domain knowledge, C-DAC provided software support, and ISRO enabled communication facilities through satellite connectivity. The project enabled online consultations for patients belonging to distant areas with an expert clinician at RCC over live video. For this purpose, patients, either for early detection of cancer or follow-up review after discharge, approached a Nodal Centre of RCC for online consultation with the clinicians in RCC.

In the absence of obtaining proper user requirements from medical practitioners, we noticed that the telemedicine equipments made available were merely video conferencing equipments without any peripheral devices attached to it. The bandwidth of the connectivity was found to be only 256 kbps, which did not give continuous and smooth stream of video. Frequently the video was found to be jerky, erratic and discontinuous on account of packet loss. We noticed that with the existing video quality the tele-consultation was not effective and that neither the clinicians nor the patients were happy in the online consultations. The clinicians stated that in the absence of peripheral devices and especially without a hand-held general exam camera and electronic stethoscope, detailed examination was not possible. The average percentage of patients opting tele-consultation was only 1.8 during the period from 2005 to 2009. The analysis of turnout of patients to the nodal centres during the period showed a declining trend as depicted below:



* Karunagapally, Kozhencherry, Kochi, Palakkad and Kannur.

The Government stated (December 2010) that the institution has decided to switch over to KSWAN* having higher bandwidth.

Change Control Management

Change control management is an integral part of any IT strategy, and is used to protect processes and systems. Change control within IT systems is a formal process used to ensure that changes to a product or system are introduced in a controlled and coordinated manner. We noticed the following lapses in this regard:

- There was no change control procedure to ensure that the software is not modified unauthorisedly.
- Changes to the source code were not documented, got verified at supervisory level and got approved at senior management level.
- Logs of such changes were not monitored, stored and critically analysed.
- The modified programs were not distinguished from the original by assigning any version numbers. The modified versions were put to use without any trial run.

The Government stated (December 2010) that change control management procedures could not be put to practice owing to time constraints.

Deficiencies in System Design and Development

Loss of records while saving to the database

Data analysis revealed that the amount stored at the column relating to cash in the table for storing net transactions was not matching with the corresponding values (product of quantity and price stored in the table relating to transaction details). The cash collected was stored in excess of ₹ 47,347 than the due amount in 230 instances.

The management stated (June 2010) that the program would correctly compute the due amount and print the bill, but owing to unexpected errors returned by external java-based programs used for printing, there was the possibility for data loss while saving to the database. Occasionally when such cases were pointed out by laboratory departments the database was modified through backend access. It exposed the system to the following issues:

- Risk of fraud in the case of uncontrolled backend access.
- Reduced integrity of the system.

* Kerala State Wide Area Network, is the core common network infrastructure initiated for e-Governance in Kerala.

- Reduced dependability of the System through record loss.
- Reduced usefulness to the management.

The Government stated (December 2010) that steps would be taken to rectify the drawbacks.

Design deficiencies leading to inaccurate passing of journal entries

HIS has the facility to generate a daily collection report, showing the entire receipts of the Institution and its remittances. As HIS and OMS were not integrated the figures generated in the HIS were manually entered into OMS.

We noticed that the credit and debit side of the statement did not tally on most of the days. The output of the HIS report were wrongly adjusted before entering to the OMS for setting off the discrepancies. While journalizing, the difference in amount was seen wrongly adjusted in different heads. e.g., the daily collection report of HIS for 19 February 2010 showed the total collection amount as ₹ 22,75,583.40 (Cr) and the payments/apportioning to various heads as ₹ 22,75,533.40 (Dr) having a difference of ₹ 50. In the journals prepared, the amount of ₹ 50 was seen adjusted by reducing the amount collected under 'Investigation and treatment charges (Dr)' by an equal amount. While the credit side was higher than the debit side on most of the days, it was the other way round on some other days. This would mean excess credit of a day would be set off against the excess debit on another day. Without considering set off of plus or minus values, a tabulation of net differences in daily collection reports for the period from 2004-05 to 2009-10 worked out to ₹ 2,38,668.90 as indicated in Table 1.14.

TABLE 1.14: DETAILS OF DIFFERENCES IN DAILY COLLECTION REPORTS

<i>Financial Year</i>	<i>Amount collected (₹)</i>	<i>Apportioning to accounting heads (₹)</i>	<i>Difference (₹)</i>
2004-05	3,83,55,506.74	3,83,41,037.24	14,469.50
2005-06	27,69,06,970.35	27,69,76,036.85	69,066.50
2006-07	35,23,87,692.70	35,23,51,234.70	36,458.00
2007-08	42,69,03,163.56	42,68,47,544.64	55,618.92
2008-09	51,95,48,460.96	51,95,16,529.73	31,931.23
2009-10	60,58,93,360.04	60,59,24,484.79	31,124.75
Total			2,38,668.90

The actual discrepancy figures would still be higher since the figures indicated represent net of debit and credit discrepancies. As the figures in the journals had no authenticity, it could not be construed that the accounts of the institution over the years were drawn up properly and, therefore, did not reflect the true and fair view. It was also observed that neither the internal auditor* nor the statutory auditor had pointed out this mistake in their reports so far.

The Government stated (December 2010) that a suspense-head has since been opened to temporarily accommodate the differences. Earnest efforts would be initiated to solve the issue of non-tallying of figures. HIS and OMS would be integrated.

Post Implementation Review

A Post Implementation Review (PIR) evaluates how the project was run and whether or not the goals have been accomplished. A PIR would bring to light the area of weaknesses, deficiencies, flaws, drawbacks, etc., based on which the management could take measures to improve the system so that the goals are achieved with limited resources.

But, no PIR was conducted by the management to assess the strengths and weaknesses of the system.

The Government stated (December 2010) that since the system continued to be under development, the PIR could not be conducted.

GENERAL CONTROLS

Organisational and Management Controls

Organisational and management controls are the high level controls adopted by management to ensure that the computer systems function correctly and that they are satisfying business objectives. We noticed that the controls put in place were not sufficient to ensure that the IT activities are adequately controlled:

(i) Ineffective Execution of Management Controls

Success of any project depends on significant participation by top management. However, we noticed that Management Information System (MIS) reports for overall supervision, guidance, direction, regulation and control over the business activities of the institution were not obtained by the top management for analysis. Regular reports on important transactions such as exception reporting, individual deviant activities, major irregular and abnormal

* The institution has chartered accountants as internal auditors and as statutory auditors.

transactions, high value transactions, etc. requiring the personal attention of the top management were also not obtained for execution of controls. We also noticed that the internal auditor was not monitoring system resources.

The Government stated (December 2010) that steps have since been initiated for better scrutiny by top management.

(ii) *Lack of MIS reports causing persistent irregularities in electronic recording of attendance*

The attendance of staff was recorded through electronic card punching. When the entry and exit are recorded by swiping the card on a day the system would treat this as proper punching. When either entry or exit is absent the system would mark it as a miss-punch. Our analysis found the cause for miss-punch by employees as either forgetting to bring/swipe the card or even deliberately not swiping the card.

Data analysis revealed that some of the officials were regular in miss-punching as shown below:

- There were 61 employees who had miss-punched on number of days ranging from 873 to 100 during the period 2005 to 2009.
- One of the Administrative Officers (Head of Administration Department) was seen to have miss-punched on 246 days during his tenure of service in the RCC from 29th January 2009 to 9th February 2010.

Since no MIS reports were made available to the top management, these irregularities could not be brought to the attention of the Head of the Institution.

The Government stated (December 2010) that action would be initiated to solve these issues while introducing biometric system of punching.

(iii) *Lack of internal controls resulting in vulnerability of the system*

A reference is made in paragraph 1.5.9.2 to non-tallying of daily collection reports of HIS. Although the net differences (₹ 2.39 lakh) in credit and debit worked out was a small figure compared to the annual cash transaction of the institution (₹ 44.45 crore), its importance in the internal control is very high since it would make the system vulnerable to risk of fraud.

The Government stated (December 2010) that earnest efforts would be initiated to solve the issue of non-tallying of daily collection reports.

(iv) *Improper mapping of business rules relating to attendance*

In OM No.60/17/64-Ests (A) dated 4-8-1965, Ministry of Home Affairs, Government of India have directed that late attendance of employees not exceeding ten minutes are condoned on every working day. Late attendance up to an hour, on not more than two occasions in a month may be condoned. Late attendance (exceeding ten minutes) from every third occasion in a month attracts debiting of casual leave for half a day. Various State Governments have adopted this rationale and made provisions in their Rules and Regulations.

The same rationale was adopted in the institution, when the manual attendance register had been used. However, while mapping the business rules to the computerised environment, there was deviation in the business rules followed hitherto.

References are made in sub paragraphs 1.5.10.9 (ii) and (v) of this paragraph to recording of attendance through electronic media and the software package used for it. Late attendance in excess of first 180 minutes attracted casual leave for half a day, followed by debiting casual leave for half a day for the multiples of 90 minutes. Whereas in the SCTIMST*, Thiruvananthapuram, which was taken as a role model for computerisation of attendance by the RCC, every late attendance exceeding ten minutes on a day after condonation of the first 180 minutes, casual leave for half a day was debited.

We noticed that the deviation in the business rules generating undue benefits to employees was not authorized by the Governing Body/Executive Committee of the institution.

The Government stated (December 2010) that the deviation in business rules would be rectified. The action of the management would be ratified in the Executive Committee.

(v) *Non-mapping of business rules resulting in mistakes in computation of loss of working hours*

A reference is made in paragraph 1.5.10.1 (ii) to recording of attendance through electronic media. Software package (Savior) is used to capture the in-time, out-time and compute the duration of working hours of employees. The system has the provision to work out loss of working time (in minutes) on the basis of the details of shift roster entered. The default working hours are fed into the system as 9.00 a.m. to 4.30 p.m. While late attendances up to 10 minutes are condoned everyday, early departure is wholly debited in the computation. In

* Sree Chitra Tirunal Institute of Medical Science and Technology, Thiruvananthapuram, a Central Autonomous Body under the Department of Science and Technology, Government of India.

addition a total of 180 minutes including a maximum of 90 minutes on a day is condoned. Late attendance in excess of eligible period is made good by debiting leave. The Administration Department was to keep watch on loss of working hours.

Members of nursing staff are working in various shifts. The time period in shifts varies from 300 to 450 minutes, excluding night shift of 12 hours. There are 18 time slots* depending on the nature and location of duty. However, the shift roster for the nursing staff is not entered in the system. In its absence, the system cannot give proper analysis of the attendance of nursing staff. The loss of working hours was stated to be monitored manually by the Nursing Department for debiting leave. Since the manual computation was cumbersome and prone to errors, we entered the shift roster for November 2009 into data tables for the computation. Our analysis revealed that 38 employees had loss of working time in excess of 180 minutes in that month. But no leave was seen debited against these cases. E.g., Employee IDs 5208, 1254, 1090, 1091 and 1306 had loss of working time of 290, 274, 329, 216 and 231 minutes respectively. Ineligible payment as salary on account of non-debiting of leave worked out to ₹ 34.59 lakh during the period from January 2002 to August 2010.

The Government stated (December 2010) that steps have since been initiated to solve the issue.

(vi) *Lack of control through absentee statement*

Absentee statement is a time-tested internal control tool to monitor the absence and leave of employees. As a control measure Establishment Section generally fixes a date on which all the Departments/Sections are to furnish a statement of absentees, on the basis of which the pay and allowances are to be regulated.

Both the formal and non-formal leave accounts are computerised in the RCC. But, in the absence of provision for online submission of leave applications, employees submit manual leave application forms to the Heads of the Departments (HoDs) concerned, who transmit the same to the Establishment Section, sanctioning subject to eligibility.

A reference is made in paragraph 1.5.10.1 (ii) to recording of attendance through electronic media. However, no provision was enabled in the system to generate absentee statement. No date was fixed for watching receipt of absentee statement. In view of computerisation the system of manual absentee statement was also discontinued. In its absence, we observed recovery of salary paid in excess after even six months as the pay bill processing treats everyone as

* E.g., (1) from 8 a.m. to 3.30 p.m.; (2) from 8.30 to 4 p.m.; (3) from 8.30 a.m. to 3.30 p.m.; (4) from 9 a.m. to 4.30 p.m.; (5) from 9 a.m. to 4 p.m.; etc.

present by default and salary is paid without regard to the fact whether one was absent/on leave without allowances/on half pay leave.

The Government stated (December 2010) that steps have since been initiated to generate absentee statement and insist on watching of the absentee statement.

(vii) *Non-fixing of reorder level causing inability of the system for generation of purchase indent*

According to the System Requirement Specifications, purchase orders are to be issued on the basis of the reorder level fixed. We noticed that no VEN Analysis* has been done based on which the maximum and minimum quantity to be stored, the reorder level and the reorder quantity are to be fixed.

The reorder level and reorder quantity would also depend on the lead time† and information from the past experience.

In the absence of fixing the reorder level and reorder quantity, purchase orders could not be generated through the system. The stock level and consumption of various items at the stores for the last three months were tabulated manually to prepare the monthly indents. We noticed that 40 per cent of labour is spent on this avoidable manual work. Cost of avoidable manpower worked out to ₹ 9.58 lakh during the period from January 2005 to August 2010.

Human Resource Management

Staff training and development are closely linked to human resource planning. It ensures that organisation has controls and procedures in place to reduce the risk of mistakes being made.

(i) *Absence of training*

Although the institution has been computerised since 1991, the employees were not trained adequately in the operation of the software. The absence of training had the following impacts:

- Modules in the software were either unutilised or underutilised as pointed out in paragraph 1.5.7.2.
- Unaware of the importance of the electronic resources and their relevance in the business, vital data relating to actual pay bills were replaced with wrong data as pointed out in paragraph 1.5.10.5(i).

* Vital, Essential and Non-essential Analysis.

† The time lag since a user department makes an indent till the supply of the material/ medicines.

- The end users were unable to demand for rectification of bugs and had to limp with manual processes.

The Government stated (December 2010) that steps would be initiated to impart adequate training to staff.

(ii) ***Absence of job rotation***

Absence of training forced the institution to unduly depend on certain people. There are employees, who are never transferred to any other posts. For example, we noticed that billing counters are dependent on certain officials without a second line of employees. We also noticed that the pay bill preparation is solely dependent on a single official. Vacancy causing by the retirement or otherwise of such employees would jeopardise the business of the institution.

The Government stated (December 2010) that steps would be initiated for job rotation after imparting adequate training to staff.

Physical and Environmental Controls

(i) ***Lack of information security policy***

Information security means protecting information and information systems from unauthorized access, use, disclosure, disruption, modification or destruction. We observed the following lapses arising from the lack of information security policy:

- No officer has been assigned with the responsibility of the IS security. Instructions pertaining to information system issues, including best IT practices and password policies were not seen circulated to the employees. Users were not seen made aware of the IS Security requirements on a periodical basis. No mechanism was seen for recording and reporting security incidents.
- There was no system to analyse audit trails available in the system, such as reviewing of logs maintained of individual activities, information on unsuccessful user login attempts, etc.
- The Management has not classified data based on its criticality and the officers concerned were not made responsible for ownership of data for ensuring data integrity.
- Exception reports were not reviewed periodically.

(ii) *Ineffective environmental control*

The objective of environmental controls is to prevent computer equipments and the information from the environmental damage, caused by fire, water (either actual water or excess humidity), earthquakes, electrical power surges or power shortages.

While the server room is adequately protected from unauthorised access and environmental damages caused by water seepage and humidity, the likelihood of damages causing by fire is neglected. Not to speak of fire/smoke detection devices even when a fire extinguisher is not provided in the server room. The risk of fire is to be viewed vis-à-vis the fact that institution's entire data is confined to a single room.

The Government stated (December 2010) that fire fighting and detection devices would be installed in the server room.

Logical Access Controls

Logical access controls in the IT System are intended to protect computer resources against unauthorized access and are vital for proper information security and computer security.

(i) *Absence of password policy*

Lack of password policy would expose the system to the risk of unauthorized access and modification of data. We observed the following shortcomings arising from absence of password policy:

- Separate user names and passwords were not assigned to individual users. Periodical changes of passwords were not ensured.
- Though the application would be exited after 3 unsuccessful login attempts, it did not lock up on specified unsuccessful sign-in attempts exposing the system to the threat of permitting a miscreant to continue their cracking attempt any number of times.
- OMS passwords were stored without encryption. Though HIS passwords were encrypted, there was no restriction on passwords and user-ids being the same. Complex passwords were not enabled in the system.
- No instructions were issued on password policy specifying the structure and length of password, changing of passwords, secrecy to be maintained etc. The length of password was noticed to be as short as 3 characters. Users were not forced to change the initial passwords set by administrator.

(ii) *Non-assignment of individual user login-identification*

User accountability is ensured by proper identification of the users. However, we noticed that instead of providing individual user login-ids, the end users were forced to log into the system using group login-ids. One group login-id is used by a number of people working in a Department. For example, a group of employees assigned to three or four billing counters located in a billing kiosk named Bill 1 use the same user-id 'Bill 1'.

The Government stated (December 2010) that it has since been decided to assign individual login-ids.

(iii) *Non-capture of login-identification*

In order to circumvent the design deficiency of capturing individual login-ids, data entry forms were provided with a column for entering user's name. As the user had to enter his name in each transaction, it was time consuming, and also liable to misuse. The users can fill in junk characters like 'aaa', 'xx', etc. or leave the column blank.

Data analysis revealed that 85 percentage of records in a table relating to bill transactions were devoid of user-ids, 84 percentage of user credentials in another table for Cancer Care for Life did not match with the authorized users and in 51 percentage of records in another table on net transactions had null values in the field for storing user-ids.

As a result, the system is devoid of login information as to who entered a particular piece of data. This lapse would stand in the way for prevention against miscreant user activities and deprive the institution of a tool in prevention of frauds and mistakes.

The Government stated (December 2010) that the issue would be solved by assigning individual login-ids.

Audit trail

Audit trail is a chronological sequence of records, each of which contains evidence directly pertaining to and resulting from the execution of a business process or system function in addition to maintaining a record of user activity and other events that show the details of user and system activity:

(i) *Non-retention of basic data*

Any loss of data or unauthorized modification to the existing data is highly detrimental to business.

Data analysis showed that the storage of pay bill details in Office Management System (OMS) did not correspond to the office copy of pay bills. Two examples are shown in Tables 1.15 and 1.16.

TABLE 1.15: DATA STORED IN THE SYSTEM (JULY 2008)

<i>Name</i>	<i>BP</i>	<i>Spl. Pay*</i>	<i>DA</i>	<i>HRA</i>	<i>CCA</i>	<i>TA</i>
Shri Raveendran Nair, R.	12250	6125	8636
Shri Shaji, J.	7450	3725	5252

* In the absence of a field for Dearness Pay a field relating to Spl. Pay was used to store DP.

TABLE 1.16: INFORMATION AVAILABLE IN THE OFFICE COPY OF PAY BILL (JULY 2008)

<i>Name</i>	<i>BP</i>	<i>DP</i>	<i>DA</i>	<i>HRA</i>	<i>CCA</i>	<i>TA</i>
Shri Raveendran Nair, R.	12250	6125	8636	2756	180	..
Shri Shaji, J.	7450	3725	5252	1676	180	200

The Government stated (December 2010) that the time constraints in implementation of pay revision orders had caused the issue.

(ii) Non-retention of electronic and manual office copies of sales bills

When a sales bill is generated the number of items sold is captured in a table for storing transaction details. Subsequently, if one of the items is cancelled the corresponding entry is made in the same record and the quantity is updated with the net quantity after the cancellation. The cancelled quantity is stored in another column of the same table.

Since these are two transactions: (1) for sale of items, and (2) for cancellation of items, for proper audit trail, both the transactions should have been stored as such. Instead the record is updated based on the latest transaction resulting in loss of details in respect of the original one. As a result, in the case of a cancellation, the original bill is not retrievable. Since the manual office copy of the original bill is not printed and preserved, this deficiency leaves the system without any audit trail.

The Government stated (December 2010) that the issue would be solved at the time of modification of the package.

Segregation of Duties

Inadequate segregation of duties increases the risk of errors being made and remaining undetected, fraud and the adoption of inappropriate working practices.

The system provided a workflow automation involving the indent preparation, approval at various levels of officers viz., Purchase Officer, Accounts Officer, Controller of Finance, etc. It facilitated authorisation controls at various levels on the basis of segregation of duty.

We noticed that the entire process had been done manually and finally the whole operation was entered into the system by a single user with a user-id having rights for entry, approval, authorisation and deletion bypassing all the inbuilt controls. The following instance depicts deletion of an authorised payment by a single user having all the said rights.

We noticed that although the transactions were manually authorised at appropriate levels, the data entered in the system by a user has never been validated and approved at supervisory level. This involves not only the risk of deliberate fraud but also prone to mistakes being crept in the system affecting data integrity. Same is the case with passing of journal entries.

The Government stated (December 2010) that the workflow automation would effectively be put to use.

APPLICATION CONTROLS

Input controls

Application controls include controls that help to ensure the proper authorisation, completeness, accuracy and validity of transactions, maintenance, and other types of data input. Authorisation controls reduce the risk of wrong, fraudulent or irregular transactions. We observed the following shortcomings in input controls.

(i) *Inaccuracies in master data*

Master table is the most currently accurate and authoritative permanent or semi-permanent computerised record of information maintained over an extended period. We noticed following inaccuracies in master data:

(ii) *Mistakes in coding of master tables*

Coding facilitates the organization in retrieval, and interpretation of data so as to arrive at conclusions on the basis of that analysis.

We noticed that the institution did not follow any systematic coding pattern. E.g., in the two closely related master tables relating to items purchased and billing items, there were several instances of an item-id having two different descriptions. A few examples are given in Table 1.17:

TABLE 1.17

<i>Item-id</i>	<i>Table for purchase items</i>	<i>Table for billing items</i>
BM001	Broom	Peripheral Blood Stemcell Supp
BP001	Beaker Polythene 1000ML	Breast Prosthesis
BP002	Beaker Polythene 500ML	Breast Prosthesis
BR001	Bradma Ribbon	Breast—Wide Excision
BS001	Brass Scissors	Bone—Bone Biopsy
CA001	Camera	Catheter-Sub Cleavian
OT002	S.S. Buyl 4 inch	Book—Questions On Ca
OT003	Tray With Lid 18x12 inch	Book On Cancer—Malayalam
PP001	Pastuer Pipette	Registration Fees
PP002	Polythene Sheets	Review Charges
RETRA	Retractors	Reimbursement of Travel
SG001	Sponge	Sigmoidoscopy
VENTII	Post-Oper.Vent Cir W Coll Botl	Ventilator

We also noticed that all the items purchased are not coded in the table for billing items. In the absence of that, billing clerks had to use a lookup list to locate the item from the table relating to items purchased to process a bill. In many instances owing to non-uniformity in codings they had to make telephonic request to IS Department to get a new code, while making the customer to wait at the counter.

The Government stated (December 2010) that action would be initiated to rectify the mistakes.

(iii) *Capture of invalid information and non-capture of vital data*

Data analysis revealed that the master table containing details of 2062 employees had many mistakes some of which are shown below:

- 208 and 380 null values in the fields of date of birth and date of retirement respectively
- While the age of 528 employees were stored below 18 years (minimum required age for employment), 9 employees had future dates as their date of birth
- Retired employees whose status still active were 21
- Incorrect date of retirement, whose date of birth falls on 1st of the month were 61

Another master table containing details of 122102 Cancer Care for Life (CCL) members included many mistakes, some of which are shown below:

- Duplicate registration numbers were 110
- 2080 null values in the field for storing date of birth of CCL members

In 3218 out of 62414 non-cash payment cases, number and date of cheques were not captured in another table relating to CCL.

In physical verification of 58 initial records (Service Books) with the data captured in the system, we observed following errors:

- Nine mistakes in the field of date of birth
- In 57 cases the name of father/mother was either not captured or not matching with the information in the SBs
- In six cases Community/Caste was incorrect
- In 17 cases the spouse's names were not captured

Although the mistakes in OMS have never been rectified, the data validated and no supervisory control exercised, the updation to the service books has been dispensed with.

The Government stated (December 2010) that action would be initiated to rectify the mistakes.

(iv) *Duplication of data entry in master tables and other files*

References are made in paragraph 1.5.10.1 (ii) and 1.5.10.1(v) to recording of attendance through electronic media and the software package used for it. In the absence of integration of 'Savior' package with OMS, another master table was created in Savior package for storing of employee details, in which details

of employees were re-entered. We noticed that none of the names in the employee tables in OMS and Savior match. There were mistakes in vital data like names, initials, gender, date of birth, etc. Even in the absence of integration, had the table been ported from OMS to Savior these mistakes would not have occurred and data entry time could have been saved.

A reference is made in paragraph 1.5.9.2 to non-integration of HIS and OMS. In its absence, the entries in the HIS daily collection report were to be manually entered into OMS. The re-entry of data would not only be prone to mistakes but also expose the system to the risk of fraud.

The Government stated (December 2010) that this issue would be solved by integration of HIS and OMS.

(v) *Lack of authorisation before and after data entry*

Before and after entering the data into the master tables, it has to be validated and authorized by the competent authorities. If the values in the master data are changed, it affects several transactions in the database and hence has a high risk.

However, we noticed that important data to be stored in the master tables of OMS such as computation of annual increments of employees is not verified and approved at peer/supervisory level before they were entered into the system. As the transaction files like monthly payroll are to be automated on the basis of the data stored in the master tables, such data would no more be subjected to human scrutiny. Hence any mistake in the master table would have far reaching consequences. The data once entered is never validated at peer or supervisory levels with proneness to mistakes and risk of fraud.

The Government stated (December 2010) that steps would be initiated for proper validation and authorisation at appropriate levels.

(vi) *Ineffective validity checks and system level authorisation*

The accuracy of data input to a system can be controlled by imposing computerised validity checks on the data presented to the system. System controls such as error correction procedure, reporting of abnormal values, control totals, etc., are some of the management tools that could prevent or detect errors likely to be crept during data entry. The management has not made use of such tools. Data analysis found the following inaccuracies and logical errors in the data stored in the system as shown below:

- While in three cases casual leave was credited in excess of 20 days in a year, in 1589 records negative values were seen credited.
- In 21 cases earned leave was credited in excess of the eligible 30 days in a calendar year.

- While 20 employees availed of casual leave in excess of eligible (20) days in a calendar year, 227 employees availed of more Restricted Holidays than their eligibility (one day).

The Government stated (December 2010) that all the mistakes would be rectified and necessary validity checks incorporated.

Processing Controls

(i) *Automation of processes*

Automation is the method of operating or controlling a process by automatic means, as by electronic devices, reducing human intervention to a minimum. This would not only reduce waste of working hours, but also make the system free from errors and omissions.

(ii) *Manual computation of annual increments*

There is a master table for storing annual increments in the system. We noticed that instead of equipping the system with the provision to automate a procedure to compute and store the annual increments, the amounts were worked out manually every year and entered into the system. We also noticed that the manually computed figures were not scrutinized and accepted at supervisory level before entering into the system.

The Government stated (December 2010) that it has since been decided to automate computation of annual increments.

(iii) *Non-automatic pay bill generation*

The OMS could be equipped to generate payroll taking into account the number of employees on roll in a month, their attendance, the leave availed of by them, etc. grouped by various cadre controls. However, the payroll generation process involved avoidable manual intervention. E.g., Bills Department had to add employees from the master database to the payroll procedure one by one under manual scrutiny.

The excessive reliance on manual intervention exposes the system to avoidable human omissions and errors. Since retired employees are also present in the database of active employees, there is the risk of ineligible payment. As the payments are credited to their bank accounts such payments would be unnoticed.

The Government stated (December 2010) that proper action would be taken.

(iv) Avoidable manual work caused by non-automation

The Medical Records Department stores the case sheets of patients treated at RCC. The case sheets are issued to outpatient clinics on the basis of online indents made by the Review counters during fixing appointments for patients to consult the clinicians concerned. The department also enters ICD codes* into the system from the information available in the case sheets.

The case sheets are preserved on the basis of their activeness. Case sheet not demanded for review during the preceding five years is considered as inactive. We noticed that sorting of inactive case sheets was done by going through each case sheet to ensure that they were not indented for review during the last five years. When a case sheet is found to be inactive, the details are scanned and stored in the system and the case sheet moved to the inactive storage location, where it would be retained only for five more years.

Since the process is computerised and the indents for case sheets are always done online, there is no point in manual checking of case sheets to compute their aging. Two-third of the working hours are set apart for this avoidable manual work. The laborious manual work could have been avoided by equipping the system to generate a report on aging. Cost of avoidable manpower worked out to ₹ 16.78 lakh during the period from January 2005 to August 2010.

We also observed that the case sheets relating to patients, who chose follow-up reviews at nodal centres† were marked as inactive and moved to inactive storage location, since they had not been indented. This would cause weeding out of active case sheets with the consequences of running into legal complications.

The Government stated (December 2010) that efforts would be initiated for discontinuance of manual work.

Output Controls

(i) Incorrect report generation

Front-end analysis of HIS revealed that when a report on the list of expired items was generated, items which were not expired and items not in stock

* The International Statistical Classification of Diseases and Related Health Problems (most commonly known by the abbreviation ICD) provides codes to classify diseases and a wide variety of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease.

† In the case of follow-up reviews at Nodal Centres, case sheets are not indented. Instead extract of relevant information contained in the case sheets are made available to clinicians.

were also shown. It was noticed that when the last lot of items is issued to a Department and if some of them are returned by that department, the item is accounted in the expired list irrespective of whether the items are expired or not. However, if some lots were left with the Stores at the time of return, this would not happen.

The Government stated (December 2010) that there were no drawbacks because, when an item returned to Store it might be an expired or a defective item and hence rightly shown in the expired list. However, we are of the view that unused medicines, not necessarily defective, are generally returned to Stores, in every hospital. It is also worth mentioning that defective items should be displayed under defective list and not under expired list.

(ii) *Non-customer-friendly bill format*

Copy of a bill cum receipt* issued from the institution for collection of payment towards investigation charges is shown below:

It goes without saying that customer-friendliness demands that the information given in a customer bill should easily be understood by the customer. It would make sense and more cognizable to the customer if the total amount is the sum of individual amounts (1,030) and the net amount is the total amount deducted by the discount amount (1,030—670). This is the practice followed everywhere. But in the instant case, the relevance of the value shown as the total amount (360) is not sensible. Verification of the output/printout by the customer and pointing out discrepancies, if any, is one of the data validation controls successfully practiced in any online environment. Hence the above bill format not only deprives the right of a customer for a lucid receipt of his payment, but it also stands in the way of one of the input controls that could be effectively exercised.

The Government stated (December 2010) that the bill format would be modified.

BUSINESS CONTINUITY PLANNING AND DISASTER RECOVERY PLANNING

Business Continuity Planning (BCP) is planning which identifies the organization's exposure to internal and external threats and synthesizes hard and soft assets to provide effective prevention and recovery for the organization while maintaining competitive advantage and value system integrity.

(i) *Absence of external data backup*

RCC faces risk of data loss since backups are not taken in any of the external media. Backup of one server is mirrored in another server, a scheduled

* Identity of the patient is concealed to conform to medical ethics

backup is also stored in a server. In the absence of external backup unforeseen threats such as electrical power surges, lightning, gutting in fire, theft or deliberate causing of physical damages, etc., would cause irreparable damages to the soft assets of the institution.

The Government stated (December 2010) that steps would be initiated to implement external online data backup in the new building being built.

(ii) Absence of offsite storage of backup

All the servers are located in a single room. As backups are not stored externally, evidently there is no question of offsite storage. Voluminous data was the reason attributed for absence of external and offsite storage of backup. But since in the present scenario, storage media have become relatively cheaper and external portable hard disks of 500 GB or above is very common, there is no merit in the argument of the institution on voluminous data. The Government of Kerala is providing data backup facility in the State Data Centre. However, the institution has not explored the viability of such a remote storage of backup.

The Government stated (December 2010) that action would be initiated to maintain an online backup at the State Data Centre.

(iii) Absence of disaster recovery planning

Disaster recovery is the process, policies and procedures related to preparing for recovery or continuation of technology infrastructure critical to an organization after a natural or human-induced disaster. Practice drills should be conducted periodically to determine how effective the plan is and to determine what changes may be necessary. System security drill is a method in case of an emergency like fire, to measure the reasonable length of time it would take to force all the users to log off from the network system, to safely shutdown the servers and to shift the hard disks to a secured place. The risk of fire damage can be reduced by the provision of fire detection and fire fighting equipments.

Since the institution has no external backup, no offsite storage of backups, no remote backup servers, etc., the need for disaster recovery planning is of utmost importance. However, we noticed the following in this regard:

- Disaster management plan is not formulated,
- Disaster management committee is not constituted,
- Data recovery practice drill has never been conducted, and
- Fire drill and system security drills have never been conducted

It is also worth mentioning that the institution could not meet the requirement of setting up a parallel system for online testing of front-end tools by us. The entire business of the institution was adversely affected for more than three days, when a server crash occurred in 2007. These vindicate the absence of disaster recovery planning and reinforces its immediate requirement.

The Government stated (December 2010) that action would be initiated for formulating disaster recovery planning.

(iv) *Malfunctioning of communication equipments causing disruption to business*

The communication facility available for telemedicine at Nodal Centre, Karunagappally to RCC is only through V-SAT. In Ernakulam, Kozhencherry, Palakkad and Kannur KSWAN* and ISDN† connections are available additionally. We noticed that the satellite communication equipments (V-SAT antenna and Sky IP terminal) were non-functional for more than six months at Karunagappally (May 2010). Disruptions of connectivity were a regular phenomenon in three out of five nodal centres visited. Since no MoU was signed with the other two participating agencies, RCC could not effectively achieve the benefits of telemedicine project.

The Government stated (December 2010) that signing of MoU would be ensured in the second phase of the OncoNet project.

(v) *Lack of control over AMC provider*

According to the terms of Annual Maintenance Contract (AMC) entered into with M/s PCS Technology Ltd., the customer was to keep record of machine failure including the nature of failure, date and time of booking the complaint, call completion and the total down time. The fault register revealed that there were 129 instances of hardware malfunctioning recorded during the period from 22nd December, 2008 to 17th February, 2010. However, there was no column to mark the date of completion of the service call. Fault registers were not maintained during the period up to 21st December, 2008.

The Government stated (December 2010) that steps have since been initiated for proper maintenance of fault register.

* Kerala State Wide Area Network (KSWAN) is envisaged to function as the core common network infrastructure for e-Governance.

† Integrated Services Digital Network (ISDN) is a set of communications standards for simultaneous digital transmission of voice, video, data and other network services over the traditional circuits of the public switched telephone network.

(vi) Non-levy of penalty from the AMC provider

The Service Level Agreement (SLA) stipulated that the maximum permissible downtime would be 48 hours in a quarter excluding holidays. Response and completion time was four hours and 12 hours respectively. Penalty for completing the calls after the stipulated time was five per cent of quarterly AMC charges of the equipment in respect of servers and two per cent in respect of desktops/clients. Further the vendor was bound to ensure an availability of 98 per cent for all computer systems and peripherals. However, the fault register revealed that the exact time of occurrence of faults and time of rectification were not noted in any of the cases. In the absence of such data, it was not possible to calculate the downtime and invoke penal provisions of the SLA.

We also noticed that 30 per cent of entries did not contain the date of attending the service call. From the sparse data available, delay in attending service call ranged from 3 to 18 days. However, no penal provisions were invoked against the vendor.

The Government stated (December 2010) that the conditions would strictly be followed in future.

CONCLUSION

Though computerisation project started in 1991 and evolved into a Hospital Informaion System by 2005 capable of providing telemedicine facilities incurring an expenditure of above ₹ 2.35 crore, other than partially computerising some of the activities, the institution is yet to make use of full-fledged computerisation. Ineffective organisational and management controls, inadequate planning, improper exercise of internal controls, etc., resulted in a non-reliable system incapable of providing reasonable assurance to the management.

RECOMMENDATIONS

- Involvement of top management should be ensured by constitution of IT Steering and Monitoring Committees.
- The information system should urgently be subjected to software audit review to detect its bugs such as data loss so as to ensure reasonable assurance to the management.
- Immediate steps should be initiated to generate accurate reports on daily receipts and remittances so as to reduce the risk of fraud.
- The telemedicine facility should be made effective by introduction of peripheral sophistication and faster telecommunication among the nodal centres.

- MoU should be signed with participating agencies in telemedicine projects to ensure non-interrupted business.
- Information system security and password policies should be formulated and their compliance ensured.
- Authorisation and validation of data should be given utmost priority. Completeness and correctness of data should be certified at appropriate levels.
- A post implementation review should be conducted to identify areas of weaknesses and deficiencies.
- Rules relating to monitoring of attendance should be reframed in the rationale followed by Central and State Governments and approval of the Governing Body obtained.
- Shift roster of nursing department should urgently be captured into the system and loss of working hours computed through the system.
- A suitable Business Continuity/Disaster Management Plan should be formulated and implemented.

[Audit Paragraph 1.5 contained in the Report of Comptroller & Auditor General of India for the year ended 31 March 2010 (Civil).]

Notes furnished by Government on the above audit paragraph is included as Appendix II.

73. Regarding the audit paragraph the Director, Regional Cancer Centre submitted that, in 2002-03 ₹ 2.35 crore was sanctioned for the development of Telemedicine. For its implementation, a Hospital Information System (HIS) was essential and C-DAC was entrusted with and then after obtaining permission from the Government of India developed a system. But the Office Management System which was already implemented in 1996 by a private agency did not integrated with the HIS. After the objection raised by Audit a fresh proposal to revamp the whole system was approved by the Planning Board and accordingly ₹ 3 crore was allotted for the development and installation of Hospital Management Information System.

74. To a query of the Committee, the witness added that Telemedicine was operational and 5 periferal centres in Kollam, Karunagappally, Kozhencherry, Emakulam and Palakkad and one NGO centre in Kannur were functioning using this. Though Patients follow-up, Paliative Care, Clinical discussion etc. were conducted through these centres, its utilization is not very high.

75. The Committee noticed that the deficiencies were due to non-integration of Office Management System and Hospital Information System, both of which were working on different outdated technologies. Hence the Committee decided to recommend that the Health and Family Welfare Department should take necessary steps to develop a full-fledged Hospital Management Information System. It also recommended that RCC should go ahead with RFP (Request for Proposal) for HMIS utilising ₹ 3 crore sanctioned in the budget for the financial year 2013-2014 at the earliest so that specific uses and design requirements of RCC could be met rather than implementing the HMIS through the e-Health Project of Government of Kerala.

Conclusion/Recommendation

76. The Committee analyses that the deficiencies pointed out by Audit are due to the non-integration of Office Management System and Hospital Information System in the Regional Cancer Centre which were working on different outdated technologies. The Committee evaluates that it is high time to develop a full-fledged Hospital Management Information System (HMIS) adopting latest technologies. So the Committee directs the Health and Family Welfare Department to take essential steps in this regard. It also recommends that Regional Cancer Centre should be permitted to go ahead with Request for Proposal (RFP) for HMIS at the earliest so that specific uses and design requirements of RCC could be met rather than implementing the HMIS through the e-Health project of Government of Kerala, and urges the Health and Family Welfare Department to look into the matter urgently.

Thiruvananthapuram,
16th December, 2014.

DR. T. M. THOMAS ISAAC,
Chairman,
Committee on Public Accounts.

APPENDIX I

SUMMARY OF MAIN CONCLUSION/RECOMMENDATION

<i>Sl. No.</i>	<i>Paragraph No.</i>	<i>Department concerned</i>	<i>Conclusion/Recommendation</i>
(1)	(2)	(3)	(4)
1	58	Health and Family Welfare	The Committee chides the Health and Family Welfare Department for not formulating a masterplan to implement the objectives as envisaged in the State Mental Health Policy, 2000 even after thirteen years. The Committee remarks that the State Mental Health Policy 2013 is not an alternative to State Master Plan and directs the Health and Family Welfare Department to formulate a mental health plan at the earliest and also to furnish the revised Mental Health Policy to the members of the Committee.
2	59	„	The Committee notices that there is no effective mechanism to review the progress of implementation of the Mental Health Policy in our State. It is of the opinion that without reviewing the merits and demerits of a policy, it could not be evaluated. So the Committee directs the Health and Family Welfare Department to take necessary steps evolve a methodology to review the programme.
3	60	„	The Committee was surprised to note that a building constructed for the Mental Health Centre, Thrissur was left idle as its construction is not favourable for accommodating lunatic patients. Intensifying the gravity the Health and Welfare Department had settled the bills even without verifying the work. The Committee remarks that the officials of the

(1)	(2)	(3)	(4)
			Health and Family Welfare Department are also equally responsible as the PWD for this futile work. The Committee directs the Health and Family Welfare Department to be more vigilant in avoiding such wastage of public money and suggests that the building should be made use of for other productive purposes at the earliest.
4	61	Health and Family Welfare	When informed that the epidemiological survey was envisaged to be complete in January 2014 itself, the Committee urges the Health and Family Welfare Department to furnish a report regarding the epidemiological survey at the earliest.
5	62	„	The Committee observes that an amount of ₹ 56 lakh released to the Medical College Hospital, Thiruvananthapuram for enhancing the number of posts of psychiatrist and also for commencing M.Phil Courses in Clinical Psychology and Psychiatric Social Worker and the diploma course in psychiatric nursing was refunded without initiating any step. It suggests that the Health and Family Welfare Department should take meticulous effort to get the amount to materialise the proposals at the earliest.
6	63	„	The Committee recommends to take necessary steps to start psychiatric units in all Taluk Head Quarters Hospitals and the hospitals upgraded as district hospitals.
7	64	„	The Committee recommends that measures should be taken to operationalise the IMHANS at Kozhikode at the earliest. Necessary fund and posts be sanctioned for its smooth functioning.

(1)	(2)	(3)	(4)
8	65	Health and Family Welfare	<p>The Committee was anxious about the plight of the lunatics. It remarks that the person once treated for psychic disorders will be viewed with suspicious eyes through out their life. The Committee feels pity over the fact that many patients were left abandoned at the place of treatment even after they were cured. It emphasizes the need of a state level rehabilitation centre under the control and supervision of the Health and Family Welfare Department with facilities for work as well as vocational training. The Committee is of the opinion that attending mental patients requires much dedication and should not be carried out as part of one's official duty. Hence it suggests to incorporate voluntary agencies in the rehabilitation of mental patients.</p>
9	66	„	<p>The Committee directs the Health and Family Welfare Department to collect and furnish detailed report regarding the Psychiatric hospitals/nursing homes, de-addiction centres, rehabilitation centres, care homes, day care homes etc. under the control of Non Governmental Organizations or Private agencies functioning with the aid from Social Justice Department.</p>
10	67	„	<p>Considering the Media reports regarding the reprehensible activities of certain private agencies including sexual abuse, the Committee demands for closing private institutions lacking adequate facilities. It directs that State Mental Health Authority has to monitor such institutions in this sector. The Committee</p>

(1)	(2)	(3)	(4)
11	68	Health and Family Welfare	recommends that the Health and Family Welfare Department should take necessary steps to compile a comprehensive database of all mental health treatment centres in various disciplines in the state.
12	69	”	When informed that in our state rehabilitation centre, care homes, day care homes etc. for lunatics are being established with the certification of Social Justice Department under the PWD Act [Persons With Disabilities (Equal Opportunities, Protection of Rights and Full participation) Act, 1995], the Committee opines that there should be a consensus between the Social Justice and Health and Family Welfare Departments in this regard and license for such institutions should be issued under the provisions of Mental Health Act by the Health and Family Welfare Department. It directs the department to take up the matter with Government of India to resolve the contradiction in the provisions in the Mental Health Act and PWD Act regarding the admission of wandering lunatics in such centres.
13	70	”	The Committee strongly recommends to take appropriate action to conduct inspections as envisaged in the Mental Health Act and to appoint adequate number of inspectors, at the earliest.
			The Committee directs the Health and Family Welfare Department that sufficient fund should be provided to construct a new building for State Mental Health Authority. It also recommends to take necessary steps to enhance the staff strength of State Mental Health Authority.

(1)	(2)	(3)	(4)
14	71	Health and Family Welfare	<p>The Committee analyses that in higher secondary schools serious psychological issues are reported among children as a result of the increased use of mobile phones and internet as well as the mental stress due to academic competition which necessitated setting up of counselling centres in schools. Hence the Committee emphasises the necessity of expanding mental health programme. It observes that many unauthorized counselling centres are functioning throughout the State. So the Committee directs the Health and Family Welfare Department to take up the matter with Central Government to make necessary amendments in the Mental Health Act to make the registration of counselling centres mandatory.</p>
15	72	„	<p>The Committee expresses its dissatisfaction over the lackadaisical attitude of the Health and Family Welfare Department in not furnishing the Remedial Measures Taken Statement regarding the audit paragraphs even at the time of Committee meeting. It condemns the department for not complying the assurance given at the time of witness examination that notes would be furnished within one month. It reiterates its earlier demand to furnish the same within one month.</p>
16	76	„	<p>The Committee analyses that the deficiencies pointed out by Audit are due to the non-integration of Office Management System and Hospital Information System in the Regional Cancer Centre which were working on different outdated technologies. The Committee</p>

(1)	(2)	(3)	(4)
			<p>evaluates that it is high time to develop a full-fledged Hospital Management Information System (HMIS) adopting latest technologies. So the Committee directs the Health and Family Welfare Department to take essential steps in this regard. It also recommends that Regional Cancer Centre should be permitted to go ahead with Request for Proposal (RFP) for HMIS at the earliest so that specific uses and design requirements of RCC could be met rather than implementing the HMIS through the e-Health project of Government of Kerala, and urges the Health and Family Welfare Department to look into the matter urgently.</p>

NOTES FURNISHED BY GOVERNMENT

GOVERNMENT OF KERALA

Statement showing action taken report on the Audit paras of Performance Audit-2010 conducted by
Comptroller and Auditor General on Mental Health Care Facilities in Kerala

Health & Family Welfare(E) Department

Sl. No.	Audit Para	Recommendation	Action Taken
1.	1.1.6	State Government had not formulated any plan to implement the objectives envisaged in the State Mental Health Policy 2000	<p>No formal plan have been formulated by the State Government. However all the programmes implemented in the state are in consonance with the provisions of State Mental Health Policy, 2000.</p> <p>District Mental Health Programme (DMHP) provides integrated mental health system providing cost effective psychiatric treatment to those having major mental disorders.</p> <p>State Government have taken over DMHP, Thiruvananthapuram and Thrissur on expiry of the term of Central Assistance.</p> <p>Community Mental Health Programmes (CMHPs) in the pattern of District Mental Health Programme have been implemented by the State Government in Kasargod, Malappuram and Kozhikode districts under National Rural Health Mission (NRHM).</p> <p>5 DMHPs and 3 CMHPs conduct 169 peripheral Psychiatric out reach clinics in the 8 districts. 32,452 new patients have registered in these clinics.</p> <p>Drugs are made available free of cost in District Mental Health Programmes, Mental Health Centres and Medical College Psychiatry units.</p>

	<p>Psychiatry units started in all District Hospitals and some of the Taluk Head quarters Hospitals (THQHs).</p> <p>Suicide prevention clinics and De-addiction clinics started in all Government Medical College Psychiatry departments.</p> <p>Child and Adolescence Clinics and Geriatric Clinics started in some of the Medical Colleges.</p> <p>Suicide prevention project by name Kerala Integrated Scheme for Intervention in Suicide (KRISIS) implemented by State Government in 2003.</p> <p>KRISIS identified Adolescents as vulnerable group.</p> <p>Suicide prevention programmes among Adolescents were given preference in this.</p> <p>Trainers training on common psychological problems among adolescents and life skill training were organized to District Coordinators of Career Guidance Cells of Higher Secondary schools to enable them to conduct training programmes in schools of their districts. High School Teachers were also given training enabling them to function as school counselors.</p> <p>Training to General Medical Doctors and other paramedical staff were conducted under DMHPs and CMHPs.</p> <p>Mental health awareness programmes were organized for all strata of society under DMHP and CMHPs.</p>

2	1.1.8.1	State Government did not conduct any epidemiological survey to identify mentally ill persons in the State as recommended by National Human Rights Commission	Few self help groups were formed in Thiruvananthapuram, Malappuram, Kasargod, Wayanad and Kozhikode districts. This study is not feasible in the present situation and is irrelevant.
3	1.1.8.2	Government should initiate steps to amend the Act /Rules to prescribe qualifications and to regulate the practice of Clinical Psychologists, Counsellors and Psychiatric Social workers.	State Mental Health Authority have submitted guidelines for fixing the qualifications and responsibilities of clinical Psychologists and Psychiatric Social Workers to Director of Health Services. Decisions taken by the expert team constituted by Government of India for amending the Mental Health Act is under processing.
4	1.1.8.3	The Psychiatric institutions and nursing home were functioning without all the minimum facilities required under the Act.	Licensing have been started. 66 institutions were inspected and the report have been scrutinized. Licence will be issued to eligible institutions soon. Steps have been taken to get the inspection report of the remaining institutions.
5	1.1.9.1	Government should provide adequate staff in the Mental Health Centres and peripheral institutions such as Psychiatrists, Clinical Psychologists and Paramedical staff.	Proposal to create 98 new posts in various categories for the three Mental Health Centres is under consideration of state Government.
6	1.1.10.2	No inspection of Psychiatry hospitals and nursing homes were carried out by the Inspectors. Board of visitors were not appointed for Private Psychiatric hospitals and nursing homes.	Regular inspection by psychiatric inspectors can be done only after issuing license. Board of visitors were not constituted for private psychiatric hospitals since licence were not issued. Constitution of Board will be considered on issuance of licence to private hospitals.

7	I.1.10.3	Government should foster effective co-ordination between the Health and Social Welfare Departments to address the issue of rehabilitation of mentally ill/cured patients.	It has been decided to include the Nominee of Social Welfare Department as a special invitee in SMHA meeting till provisions are made in the Rules for inclusion of the representative of Social Welfare Department as a member.
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GOVERNMENT OF KERALA

Statement showing action taken report on the Audit paras of Performance Audit-2010 conducted by
Comptroller and Auditor General on Mental Health Care Facilities in Kerala

Health & Family Welfare(E) Department

Sl. No.	Audit Para	Recommendation	Action Taken
1	1.1.7.1	Out of ₹9.98 crore received during 2005-06 to 2008-09 from Government of India for implementation of schemes under the National Mental Health Programme, ₹4.07 crore remained unspent as on March, 2010 in treasury savings bank accounts and Nirmithi Kendra/PWD.	Remarks on the utilization of funds received from Government of India for the Mental Health activities in the State along with the reason for delay in utilization of funds are enclosed herewith as Annexure.

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No. 26850/E1/11/H&FWD H&FW (E) DEPARTMENT

Remarks on Para 1.1.7.1 of the report of the C&AG for the year ended 31/03/2010

The details of fund received from Government of India under various component of the National Mental Health Programme are as follows:

Sl. No.	Institution	Fund received	utilised	balance
1	Mental Health Centre, Thiruvananthapuram	2,50,00,000	1,39,15,116	1,10,84,884
2	Mental Health Centre, Thrissur	1,10,00,000	89,46,840	20,53,160
3	Mental Health Centre, Kozhikoda	2,85,00,000	2,31,74,418	16,75,582
	Total	6,45,00,000	4,60,36,374	1,48,13,626

The details of expenditure and reason for non utilisation on the above three items are as follows:

Sl. No. 1. The amount of ₹ 250,00,000 to Mental Health Centre, Thiruvananthapuram under the National Mental Health Programme is for the infrastructure development consisting of ₹ 15,00,000 lakhs for De-addiction Centre and new female block. Out of the same De-addiction Centre has been completed and ₹ 139,15,116 has been utilised. The construction of new female block is not yet started. Out of the balance amount ₹ 70 Lakhs is with the PWD for the construction. Reason for not commencing the work is not yet reported by the PWD. The matter is under correspondence with the PWD to start the work without delay. The remaining amount of ₹ 40,84,884 is with the TSB account of the Mental Health Centre. The amount

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will be paid as and when the PWD requested for the same after commencing the work and the amount with them has been utilised.

Sl. No. 2. The amount of ₹ 110,00,000 to the Mental Health, Thrissur under the National Mental Health Programme is also for the infrastructure development of the Centre. Out of which an amount of ₹ 65 Lakhs has been given to the PWD for construction purpose. An amount of ₹ 49,67,275, has already been utilised for construction of Sick Ward, De-addiction Ward, and Central Library and for other maintenance. ₹ 15,32,725 remains with the PWD is for the construction of O.P. Block. The same has not been started. The matter is under correspondence with the PWD to start the work without delay. An amount of ₹ 39,79,565 has been spent for purchase of furniture etc and for maintenance of laboratory in the hospital. The remaining amount of ₹ 5,20,435 is with the TSB account of Mental Health Centre. The amount is proposed for electrical maintenance. But the amount is not sufficient.

Sl.No. 3. The amount of ₹ 285 Lakhs to Mental Health Centre Kozhikode under the National Mental Health Programme is for the infrastructural development of the Centre. Out of which ₹ 248.5 lakhs has already been transferred to the PWD for construction purpose. That Department has utilised an amount of ₹. 231,74,418 for construction/maintenance of Annex to Ward V New Male Forensic Ward, New Ward IV, RMO Quarters, transformer, furniture and equipments etc. ₹ 16,75,582 is with the PWD and the amount has not been returned. That Department is under correspondence to obtain the utilisation of funds and to obtain the remaining funds. An amount of Rs. 12,55,540 has been spent for installation of a transformer for

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The components of the amount are infrastructure development and staff - ₹ 46 lakhs, Medicine, Stationery and Contingencies - 38 Lakhs, Equipments - ₹ 9 lakhs, Training ₹ 12 lakhs and Public Awareness ₹ 10 lakhs. Out of the total amount ₹ 107, 82,593 has already been spent for the purpose. Funds remaining is only ₹ 7,17,407.

In this connection it may be noted that the District Mental Health Programmes are the programmes under the Government of India for the first Five years and then the responsibility of the State Government to continue the programme. Even though the programme was started in 1999 the last instalment was received from Government of India only in 2008 and in the intermittent period the State Government has met the requirements under the programme. It may also be noted that the service of Doctors, Clinical Psychologist, Staff Nurse, Psychiatric Social Worker etc were provided by the State Government. Since the programme is continued, the remaining funds will be utilised only within a short span of time and on exhausting the funds the entire programme will be taken up by the State Government.

2. Thrissur - ₹ 1.15 Crores has been received for the District Mental Health Programme in Thrissur District. The components of the amount are infrastructure development and staff ₹ 46 lakhs, Medicine, stationery and contingencies ₹ 38 Lakhs, equipments

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₹ 9 lakhs, training ₹ 12 lakhs and public awareness ₹10 lakhs. Out of the total amount ₹ 105, 22,497 have already been spent for the purpose. Funds remaining is only ₹ 9,77,503.

In this connection it may be noted that there is acute shortage of qualified personnel in the field of Mental Health generally in the State. As such there is shortage of qualified Psychiatrists, Clinical Psychologists, Staff Nurses and Psychiatric Social Workers etc in Government Service also. Due to the shortage of qualified personnel the posts under the DMHP were laying vacant for certain periods. As already pointed out in the case of Thiruvananthapuram District, here also the last instalment was received late from Government of India only in 2008. The delay in utilisation of funds of the said amount is due to the reasons stated above. It may also be noted that there is a small amount left for utilisation and the same will be utilised shortly as the programme is a continuing one and the further requirements will be met by the State Government.

3. Idukki - ₹ 26.2 Lakhs has been received for the District Mental Health Programme in Idukki District. The components of the amount are infrastructure development and staff ₹ 8.7 lakhs, Medicine, Stationery and Contingencies 4.5 Lakhs, equipments ₹ 6 lakhs, training ₹ 5 lakhs and public awareness ₹ 2 lakhs. Out of the total amount ₹ 21, 20,714 has already been spent for the purpose. Funds remaining is only ₹ 4,99,286.

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As already pointed out there are no sufficient staffs available for the programme for certain periods due to the acute shortage of qualified personnel. This resulted the delay in utilisation of the amount. However a small amount is left for utilisation and which will be utilised shortly.

4. Kannur - ₹ 48 Lakhs has been received for the District Mental Health Programme in Kannur District. The components of the amount are infrastructure development and staff ₹ 18 lakhs, Medicine, stationery and contingencies ₹ 10 Lakhs, equipments ₹ 6 lakhs, training ₹ 10 lakhs and public awareness ₹ 4 lakhs. Out of the total amount ₹ 47,24,708 has already been spent for the purpose. Funds remaining is only ₹ 75,292.

It may be noted that a very small amount only be left for utilisation and the same might have been spent since the figures are as on June 2011.

5. Wayanad - ₹ 48 Lakhs has been received for the District Mental Health Programme in Wayanad District. The components of the amount are infrastructure development and staff ₹ 18 lakhs, Medicine, stationery and contingencies ₹ 10 Lakhs, equipments ₹ 6 lakhs, training ₹ 10 lakhs and public awareness ₹ 4 lakhs. Out of the total amount ₹ 43,83,491 has already been spent for the purpose. Funds remaining is only ₹ 4,16,509.

It may be noted that a small amount is left for utilisation and which will be utilised for. *shortly.*

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better supply of electricity to the hospital. The remaining amount of ₹ 23,94,460 is with the TSB account of the Mental Health Centre for installation of the diesel generator. The same will be utilised without delay.

In this connection it may be noted that the main reason for the delay in the construction and allied works is due to the non implementation of the projects entrusted with the PWD. The PWD has already been requested to pursue immediate action to complete the works and furnish the details of utilisation of the funds. From this it may be noted that the delay is beyond the control of this Department and all possible efforts will be taken to avoid further delay. In view of the same the observation contained in the audit may kindly be dropped.

Part 2 - District Mental Health Programme, a component under the National Mental Health Programme

Sl. No.	Institution	Fund received	Utilised	Balance
1	MHC TVPM	1,15,00,000	1,07,82,593	7,17,407
2	MHC, Trissur	1,15,00,000	1,05,22,497	9,77,503
3	MHC Idukki	26,20,000	21,20,714	4,99,286
4	MHC Kannur	48,00,000	47,24,708	75,292
5	MHC Wayanad	48,00,000	43,83,491	4,16,509
	Total	3,52,20,000	3,25,34,003	26,85,997

1. Thiruvananthapuram ₹ 1.15 Crores has been received for the District Mental Health Programme in Thiruvananthapuram District.

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Part 3 - Utilisation of funds for strengthening of Psychiatric Wings of Government Medical Colleges.

The details of receipt of funds and utilisation are as follows:

Sl. No.	Institution	Fund received	utilised	balance
1	Medical College, Alappuzha	30,68,000	12,00,000	18,68,000
2.	Medical College, Kottayam	45,20,000	27,51,277	17,68,723
3	Medical College, Kozhikkoda	38,80,000	38,01,572	78,428
4	Medical College, Thrissur	44,66,000	35,71,882	8,94,117
	Total	1,59,34,000	1,13,24,731	46,09,268

Sl. No. 1. The delay occurred in utilising the amount is due to the delay occurred on the part of Nirmithi Kendra. In view of the inordinate delay steps are taken to entrust the work with the PWD.

Sl.No.2 The delay in utilisation of fund is due to the delay on the part of PWD and they have completed only 35% of the construction work.

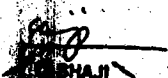
The furniture required for the building can be procured only after completion of the building hence the savings. In this connection it may be noted that the matter has already been taken up with the PWD to complete the work with out further delay.

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Sl. No.3. - The amount received has been utilised almost in full only a small amount left for utilisation.

Sl.No. 4 - Major portion of fund has already been utilised for construction of 20 bedded ward which has been commissioned. The procedure for purchase has been started and the remaining amount will be utilised totally for the purpose.

In view of the position explained above it may kindly be noted that the delay that has occurred in utilising the funds received in the matter is beyond the control of this Department. All possible efforts are being taken to utilise the remaining funds without further delay. In the circumstances the objections raised in the C&AG report may kindly be dropped.


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GOVERNMENT OF KERALA
Statement showing action taken report on the Audit paras of Performance Audit-2010 conducted by
Comptroller and Auditor General on Mental Health Care Facilities in Kerala.

Health & Family Welfare(E) Department

Sl. No.	Audit Para	Recommendation	Action Taken
1	1.1.8.4	Out of 12 construction works taken up in three Mental Health Centres and three Medical College Hospitals using Central Funds, only eight works were completed as of August, 2010.	<p>In this connection it may be noted that major portion of the works are entrusted with PWD and the delay in completion of the works is mainly due to the delay on the part of that department. However that department has been addressed to complete the works on a time bound manner. From this it may be noted that there is no laxity on the part of this department on the delay in completion of the works. The details of the expenditure so far incurred on the work and the present position of each work is as detailed below:</p> <p>1. Medical Colleges</p> <p>a) Psychiatry Department, Medical College, Alappuzha</p> <p>The work was originally entrusted with the Nirmithi Kendra and expenditure to the tune of Rs.5.23 lakhs has been incurred for Column work for ground floor which was the early work completed by the Nirmithi Kendra. In spite of protracted efforts, the work could not be pursued with the Nirmithi Kendra hence action has been taken to entrust the work with the PWD.</p>

	<p>b) Psychiatry Department, Medical College, Kottayam</p> <p>Amount received for the purpose is Rs.45.2 lakhs and after completing the construction of academic block, there is an unspent balance of Rs.18.2 lakhs and which is for the purpose of procurement of furniture and equipments. Tender process for purchasing the same is over and the amount is expected to be spent without delay.</p> <p>c) Psychiatry Department, Medical College, Kozhikode</p> <p>The amount received is Rs.38.8 lakhs and ward has been constructed utilizing the amount. Unspent balance available is only Rs.78,428/-</p>
	<p>2. Mental Health Centres</p> <p>a) Mental Health Centre, Kozhikode</p> <p>Unspent balance out of the amount received is Rs.23,94,460/- and which is not sufficient for construction of the new administrative block. Hence the PWD has been requested to submit an estimate to install generator using Rs.17 lakhs and the balance amount is proposed to be utilised for hospital equipments and which is expected to be spent shortly.</p> <p>b) Mental Health Centre, Thiruvananthapuram</p> <p>i) De-addiction Centre: Out of Rs.150 lakhs earmarked, the unutilised balance in the TSB account is Rs.40,84,884/- . An additional amount of Rs.34,15,116/- has been transferred to PWD in 12/2010 towards the tender excess and the electrification of the de-addiction Centre nearing completion.</p>

ii) Female Ward: For construction of the Female ward an amount of Rs. 70 lakhs has already been handedover to PWD


c) Mental Health Centre, Thrissur

The works of De-addiction ward and female sick ward are completed. As regards the shortage of staff, proposal for creation of posts for the three Mental Health Centres is under consideration in consultation with the Finance Department.

3. District Hospital, Kollam

As regards the observation in the report, the defect has been rectified by functioning the psychiatry ward in the building.

In view of the position explained above the objections raised in the report may kindly be dropped.



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Audit PENDING CLEARANCE
DEPARTMENT REGIONAL CANCER CENTRE

Sl No	Report No.2 31 March 2010 (CVR)	Subject / Recommendations	Present Stage
1	1.5.7.1	<p>IT Planning -</p> <p>Information Technology planning provides a structured means of addressing the impact of technologies, including emerging technologies, on an organisation. Through the planning process, relevant technologies are identified and evaluated in the context of broader business goals and targets, on the basis of which the direction for the organisation can be established. Absence of IT planning in the organization led to isolated system development lacking focus in achieving resource optimization. Hospital Information System (HIS) was not integrated with the financial and accounting software - Office Management System (OMS). The non-integration of these systems led to reconciliation issues, non-billing of subsidiary accounts, duplication of work and underutilization of man and machine resources. The Government stated (December 2010) that IT Plan would soon be formulated.</p>	<p>It is true that RCC did not have an IT Road map. That is because RCC did not develop as part of a master plan but grew based on needs and opportunities. IT applications such as TEHAS and ONCONET were also developed in the same manner. Funding for TEHAS was for telemedicine and Hospital Information System was developed as a backend operation for this. RCC is taking steps to develop an IT master plan. A steering committee has been setup and is working on developing an IT Plan.</p> <p><i>The details of Hospital Information System, its objectives, deliverables and achievements are enclosed as Annexure I</i></p>
2	1.5.7.2	<p>IT Steering and Monitoring committees -</p> <p>IT Steering Committee would be responsible for the overall direction of IT. To be effective, the IT Steering Committee should draw its members from senior and middle management and all user departments within an organisation. Senior management's presence is significant since it gives the decisions made by the committee due importance and also ensures that IT is business driven and not technology driven. Absence of IT Steering Committee led to non-implementation and non-utilisation of modules in five out of 22 departments lacking focus in achieving the optimum results. The absence of IT monitoring committee resulted in ineffective/partial implementation of computerisation in seven out of 22 departments.</p>	<p>The IT steering committee was constituted during the month of September 2011. Senior management is represented by Hospital Medical Superintendent is the Chairman, IT Systems Manager is the Convener, Heads of Departments of core services and Systems Analysts (IT) are the members of the committee.</p> <p><i>The circular of IT steering Committee is attached as Annexure II.</i></p> <p><i>The Scope and Action plan of IT Steering Committee is attached as Annexure III</i></p>

	<p>We noticed that shift roster of nursing staff were not entered into system, consultation modules were not utilized, discharge summaries were not entered into system, results of various investigations were not made available online to clinicians during consultations, etc. All these indicate need for better direction in implementation. It has also led to duplication of work, underutilisation of man and machine resources and making the system open to human errors. The Government stated (December 2010) that the IT Steering Committee would soon be constituted</p>	
<p>3</p>	<p>1.5.8.1</p> <p>User Requirement Specifications and System Requirement Specifications -</p> <p>Before taking up the computerization projects, the institution had not prepared and documented the User Requirement Specifications (URS). The development team had not prepared the System Requirement Specifications (SRS) and User Manual in respect of OMS. In case of HIS, although SRS and System Design Document (SDD) were prepared as an obligatory prerequisite for applying for the grant, these were not formally accepted by the institution. User manual prepared for HIS was never printed. But no URS was prepared and documented in case of HIS as well. There was no signing off of the projects in both the cases. There was collaboration among C-DAC, RCC and the Vikram Sarabhai Space Centre (VSSC) for the OncoNet-Kerala. However, the RCC did not enter into service level agreements/ memorandum of understanding (MoU) with the C-DAC and VSSC for upholding of its legal rights, maintenance and future support. In the absence of URS, we could not assess as to what extent the expectations of the users and the intended benefits of these projects could be achieved. The Government stated (December 2010) that proper documentation would be ensured in the second phase of the OncoNet project.</p>	<p>The RCC has completed and updated the user requirement and system requirement specifications for 15 critical modules in which the modifications were done after the implementation. A properly structured and referenced URS was not there as the requirements were then and there captured and fed into the application. Action has been taken to ensure that user requirements are properly specified, remain traceable and are documented in the upcoming projects. Regarding entering into the service level agreements/ memorandum of understanding (MoU), it is submitted that the Telamedicine project had to be implemented in time and hence service level agreements/ memorandum of understanding was not entered at that point of time. Primary level consultation has been done with VSSC Director and CDAC and steps are actively initiated to sign the MoU in this regard.</p> <p><i>The details of ONCONET-Kerala Telamedicine, its objectives, deliverables, achievements and utilization report are enclosed as Annexure IV</i></p>
<p>4</p>	<p>1.5.9.1</p> <p>Loss of records while saving to the database -</p> <p>Data analysis revealed that the amount stored at the column relating to cash in the table for storing net transactions was not matching with the corresponding values (product of quantity and price stored in the table relating to transaction details). The cash collected was stored in excess of 47,347 than the due amount in 230 instances. The management stated (June 2010) that the program would correctly compute the due amount and print the bill, but owing to unexpected errors returned by external java-</p>	<p>The first version of the application, was built using Struts 1.2 and EJB 2.0 which are based on Java Development Kit 1.4 version. For certain application modules this combination of technology works perfectly only with Oracle application server 9.0.4.0.1 version, and this version of Oracle application server runs with Redhat Enterprise Linux version 3.0. All other latest RHEL versions show some errors in application. Also most of the latest server technologies did not support RHEL 3.0 version</p>

		<p>based programs used for printing, there was the possibility for data loss while saving to the database. Occasionally when such cases were pointed out by laboratory departments the database was modified through backend access. It exposed the system to the following issues.</p> <ul style="list-style-type: none"> • Risk of fraud in the case of uncontrolled backend access. • Reduced integrity of the system. • Reduced dependability of the System through record loss. • Reduced usefulness to the management. <p>The Government stated (December 2010) that steps would be taken to rectify the drawbacks.</p>	<p>of Redhat. Because of this we found considerable difficulties in deployment of certain HIS applications after modifications. The points mentioned in the audit query (owing to unexpected errors returned by external java-based programs used for printing, there was the possibility for data loss while saving to the database) were rectified by making necessary modifications in the programming. The recurrence of such deficiencies could be fully rectified only after the reengineering the existing HIS and Accounting package to latest technology. As the audit observations were purely technical, no cash were collected in excess physically.</p>
5	1.5.9.2	<p>Design deficiencies leading to inaccurate posting of journal entries -</p> <p>As HIS and OMS were not integrated the figures generated in the HIS were manually entered into OMS. We noticed that the credit and debit side of the statement did not tally on most of the days. The output of the HIS report were wrongly adjusted before entering to the OMS for setting off the discrepancies. While journalizing, the difference in amount was seen wrongly adjusted in different heads. e.g., the daily collection report of HIS for 19 February 2010 showed the total collection amount as 22,75,583.40 (Cr) and the payments/apportioning to various heads as 22,75,533.40 (Dr) having a difference of ₹ 50. In the journals prepared the amount of ₹ 50 were seen adjusted by reducing the amount collected under 'Investigation and treatment charges (Dr)' by an equal amount</p>	<p>Necessary modifications are made in HIS-ORF report procedure in order to make the report tallied. The reason for non-tallying of the daily collection report showing the receipt (CR) and its apportionment (DR) was due to system design deficiencies by which misling of some data, especially when cancellation of credit transactions were posted, took place. Now the defect has been rectified by making necessary modifications in the coding part of the daily collection report and the difference of 19 February 2010 pointed out in the audit is now tallied. There is no difference in the net cash (Rs.1247418.85) collected on the 19 February 2010. However the issue is not fully rectified as the technology up-gradation will only tackle the limitations of HIS.</p> <p><i>The copy of the daily collection report is enclosed as Annexure V</i></p>
6	1.5.10.1.iii	<p>Lack of internet controls resulting in vulnerability of the system -</p> <p>The query is same as in 'Design deficiencies leading to inaccurate passing of journal entries'. The net differences (2.39 lakh) in credit and debit worked out was a small figure compared to the annual cash transaction of the institution (44.45 crore), its importance in the internal control is very high since it would make the system vulnerable to risk of fraud.</p>	<p>Reference to the reply to audit para 1.5.9.2 invited. It may please be noted that after making necessary modifications in the coding part of the daily collection report and the differences pointed out in the audit is now tallied. There is no difference in the net cash collected. Hence it is clear that the adjustment entries were necessary to prepare the accounts properly. There is no difference in the net cash collected before and after the rectification of the system deficiency. This has been explained suitably in the ledger accounts of the relevant accounts showing the example referred to in the Audit Report.</p> <p><i>The copy of the ledger account is enclosed as Annexure VI</i></p>

1.5.10.1.v

Non-mapping of business rules resulting in mistakes in computation loss of working hours -

A reference is made in paragraph 1.5.10.1 (ii) to recording of attendance through electronic media. Software package (Sevior) is used to capture the in-time, out-time and compute the duration of working hours of employees. The system has the provision to work out loss of working time (in minutes) on the basis of the details of shift roster entered. The default working hours are fed into the system as 9:00 AM to 4:30 PM. While late attendances up to 10 minutes are condoned every day, early departure is wholly debited in the computation. In addition a total of 180 minutes including a maximum of 90 minutes on a day is condoned. Late attendance in excess of eligible period is made good by debiting leave. The Administration Department was to keep watch on loss of working hours. Members of nursing staff are working in various shifts. The time period in shifts varies from 300 to 450 minutes, excluding night shift of 12 hours. There are 18 time slots depending on the nature and location of duty. However, the shift roster for the nursing staff is not entered in the system. In its absence, the system cannot give proper analysis of the attendance of nursing staff. The loss of working hours was stated to be monitored manually by the Nursing department for debiting leave. Since the manual computation was cumbersome and prone to errors, we entered the shift roster for November 2009 into data tables for the computation. Our analysis revealed that 38 employees had loss of working time in excess of 180 minutes in that month. But no leave was seen debited against these cases. E.g., Employee IDs 5208, 1254, 1090, 1091 and 1306 had loss of working time of 290, 274, 329, 216 and 231 minutes respectively. Ineligible payment as salary on account of non-debiting of leave worked out to 34.59 lakh during the period from January 2002 to August 2010. The Government stated (December 2010) that steps have since been initiated to solve the issue.

The nurses work on shift basis in various departments for 24 hours coverage. This is done in consensus with each departmental activity. Audit highlighted the errors that occurred while debiting the leave manually for loss of working time in excess of the permitted 180 minutes in a month. It may please be noted that there was no provision to enter the shift roster in the system by the nursing division when the audit was conducted and it was being done manually. As a result of this the actual shift duty time of the nursing department were not correctly fed in the system in which the default shift duty was taken in to account. Instead of their actual duty as allotted/ required for Hospital functioning. This had resulted in generating incorrect data regarding loss of working time as can be seen in the case of Ms. Sheela Rodriguez - EMPID 1088 and Ms. Sindhu V - EMPID 5344. In these cases the actual loss of working time was 85 minutes and 109 minutes respectively, i.e. within the permitted limit of 180 minutes of consolidated grace time in a month. Similarly the actual loss of working time in the case of the five employees referred to in the Audit Report were as shown below:

Emp code	As worked out based on default shift duty (AR figure)	As per duty done	per actual
5208	290	70	
1254	274	193*	
1090	329	176	
1091	216	176	
1306	231	176	


From the above it can be seen that there is no ineligible payment on account of non-debiting of leave for loss of working time. The system lapse has been fully rectified. As per the instruction, from November 2010 onwards steps had been taken to enter all the shift rosters of staff nurses into the computer system.

The circular is enclosed as Annexure VII

*One day's earned leave debited against her leave account as casual leave is exhausted.

<p>8</p> <p>1.5.10.3.1</p>	<p>Lack of information security policy -</p> <p>Information security means protecting information and information systems from unauthorized access, use, disclosure, disruption, modification or destruction. We observed the following lapses arising from the lack of information security policy:</p> <ul style="list-style-type: none"> No officer has been assigned with the responsibility of the IS security. Instructions pertaining to information system issues, including best IT practices and password policies were not seen circulated to the employees. Users were not seen made aware of the IS Security requirements on a periodical basis. No mechanism was seen for recording and reporting security incidents. There was no system to analyse audit trails available in the system, such as reviewing of logs maintained of individual activities, information on unsuccessful user login attempts, etc. The Management has not classified data based on its criticality and the officers concerned were not made responsible for ownership of data for ensuring data integrity. Exception reports were not reviewed periodically. 	<p>No checklist document to review the policies and practices of IT security was provided to any staff. The IT Steering Committee has now taken decision to prepare a checklist format for implementing the IT security policy. The goal of this document is to provide a common baseline of requirements that can be used within the organisation by internal auditors, end users, management staffs etc. Separate user name/passwords are given for accessing the system. The application has been modified such that the username could be tracked if any modification made within their limitation.</p> <p><i>The draft copy of IT policy document is enclosed as Annexure VIII</i></p>
<p>9</p> <p>1.5.10.4.1</p>	<p>Absence of password policy -</p> <p>Lack of password policy would expose the system to the risk of unauthorized access and modification of data. We observed the following shortcomings arising from absence of password policy.</p> <ul style="list-style-type: none"> Separate user names and passwords were not assigned to individual users. Periodical changes of passwords were not ensured. Though the application would be exited after 3 unsuccessful login attempts; it did not lock up on specified unsuccessful sign-in attempts exposing the system to the threat of permitting a miscreant to continue their cracking attempt any number of times. OMIS passwords were stored without encryption. Though HIS passwords were encrypted, there was no restriction on passwords and user-ids being the same. Complex passwords were not enabled in the system. No instructions were issued on password policy specifying the structure and length of password, changing of passwords, secrecy to be maintained etc. The length of password was noticed to be as short as 3 characters. Users were not forced to change the initial passwords set by administrator. 	<p>The ROC has formulated a detailed information security policy for the organization and are to be implemented across the organization at the operating system, database, and application levels. The individual user name / passwords are being assigned and implemented. The lock up on specified unsuccessful sign-in attempts is to be implemented in the application and is expected to be finished by 31st March 2012. Issue on password policy has been addressed in the information security policy and being instructed to the user and applications are being modified to enforce these standards. Separate user name/passwords are given for accessing the Hospital Information System, attendance and accounting applications.</p> <p><i>The draft copy of IT policy document is enclosed as Annexure VIII</i></p>

		<p>except during data entry. The management has not made use of such tools. Data analysis found the following inaccuracies and logical errors in the data stored in the system as shown below:</p> <ul style="list-style-type: none"> While in three cases casual leave was credited in excess of 20 days in a year, in 1,589 records negative values were seen credited. In 21 cases earned leave was credited in excess of the eligible 30 days in a calendar year. While 20 employees availed of casual leave in excess of eligible (20) days in a calendar year, 227 employees availed of more Restricted Holidays than their eligibility (one day). <p>The Government stated (December 2010) that all the mistakes would be rectified and necessary validity checks incorporated</p> <p>Avoidable manual work caused by non-automations –</p> <p>The Medical Records Department stores the case sheets of patients treated at RCC. The case sheets are issued to outpatient clinics on the basis of online indents made by the Review counters during fixing appointments for patients to consult the clinicians concerned. The department also enters ICD codes into the system from the information available in the case sheets. The case sheets are preserved on the basis of their activeness. Case sheet not demanded for review during the preceding five years is considered as inactive. We noticed that sorting of inactive case sheets was done by going through each case sheet to ensure that they were not indented for review during the last five years. When a case sheet is found to be inactive, the details are scanned and stored in the system and the case sheet moved to the inactive storage location, where it would be retained only for five more years. Since the process is computerised and the indents for case sheets are always done online, there is no point in manual checking of case sheets to compute their aging. Two-third of the working hours is set apart for this avoidable manual work. The laborious manual work could have been avoided by equipping the system to generate a report on aging. Cost of avoidable manpower worked out to 16.78 lakh during the period from January 2005 to August 2010. We also observed that the case sheets relating to patients, who chose follow-up reviews at nodal centres were marked as inactive and moved to inactive storage location, since they had not been indented. This would cause weeding out of active case sheets with the consequences of running into legal complications.</p>
12	1.5.11.2.iv	<p>check mechanisms are introduced in the application where data entry is done and fields are set mandatory. The inaccuracies and logical errors found in the master data entered are corrected. Effective internal control mechanism is also build in the application.</p> <p>In Medical Records department, ICD codes are entered by the trained staff (Medical record technician) and these are verified by either the Clinical Services Officer or Medical Records Officer on random basis. The Medical Records data are mainly used for the administrative information. Inactive case sheets are removed not only on the basis of patient's age but also on:</p> <ul style="list-style-type: none"> the patient's progressive disease status reference to the local hospital for symptomatic treatment death of patient not reporting for any treatment taken by the patient <p>Though computerised, inactive case sheets need to be checked manually to avoid the errors and omissions. Patients may report in between without prior appointment and these patients may not be in the appointment list taken from the system. Retention period is fixed as 10 years from the time of registration. If the inactive patient reports for follow up with in 10 years period we can issue the original case sheet and if reporting after 10 years the scanned copy of the case sheets will be issued. If the patients report for follow up at nodal centres, the patient details are entered directly into the application and not in the case sheets. It is decided to take a printout of the entered details and file in the case sheet. The deficiencies (Cost of avoidable manpower worked out to 16.78 lakh during the period from January 2005 to August 2010) are thus rectified by generating an inactive case sheet report.</p>

13	1.5.10.1.vii	<p>The Government stated (December 2010) that efforts would be initiated for discontinuance of manual work.</p> <p>Non-fixing of reorder level causing liability of the system for generation of purchase indent -</p> <p>According to the System Requirement Specifications, purchase orders are to be issued on the basis of the reorder level fixed. We noticed that no VEN Analysis has been done based on which the maximum and minimum quantity to be stored, the reorder level and the reorder quantity are to be fixed. In the absence of fixing the reorder level and re-order quantity, purchase orders could not be generated through the system. The stock level and consumption of various items at the stores for the last three months were tabulated manually to prepare the monthly indents. We noticed that 40 per cent of labour is spent on this avoidable manual work. Cost of avoidable manpower worked out to 9.58 lakh during the period from January 2005 to August 2010.</p>	<p>The reorder level was added as a menu in the Central Store module when the application was implemented in the year 2005. But the end users did not utilise the facility of reorder level and the reorder quantity due to lack of training and hence the purchase orders could not be generated through the application. The item and brand codes need to be standardized and categorized properly before any type of analysis is being done. The observation that VEN Analysis does not exist is not true. We conduct regular accurate analysis in line with the special circumstances in ROC. The conventional VEN Analysis is not possible in case of anti-cancer drugs as classifying them as VITAL, ESSENTIAL and NON-ESSENTIAL is difficult. Almost all the items of anti-cancer drugs have their own significance and their absence will create major problems. Hence we are using our own analysis as explained during the audit. The usage pattern is dependent on the various cases treated in the hospital and often varies widely over periods, necessitating human intervention and logic in fixing the ordering levels. Action has been initiated to enhance the application and to rectify the deficiencies (Cost of avoidable manpower worked out to 9.58 lakh during the period from January 2005 to August 2010) in the application design of reorder level in the Store-Purchase module.</p>
14	1.5.12.2	<p>Absence of offsite storage of backup -</p> <p>All the servers are located in a single room. As backups are not stored externally, evidently there is no question of offsite storage. Voluminous data was the reason attributed for absence of external and offsite storage of backup. But since in the present scenario, storage media have become relatively cheaper and external portable hard disks of 500 GB or above is very common, there is no merit in the argument of the institution on voluminous data. The Government of Kerala is providing data backup facility in the State Data Centre. However, the institution has not explored the viability of such a remote storage of backup. The Government stated (December 2010) that action would be initiated to maintain an online backup at the State Data Centre.</p>	<p>Steps have been taken up for backing up the data in a removable media like DVD-Rom and external storage devices like portable hard disk and is kept in the location. A Disaster Recovery Room is set up and this solves the absence of offsite storage outside computer division. Incremental backups are taken in the new server installed and configured. The scheduled backup is stored in another server to avoid data loss. An enquiry was done with the NIC team for providing data backup facility in the State Data Centre. But it was informed that storage space was not there for the deployment.</p> <p style="text-align: right;">  K. SUDARSANAN Joint Secretary to Govt. Health & Family Welfare Dept. P.O. Office #471/238832, 28/08/08 </p>

Objective of Hospital Information System

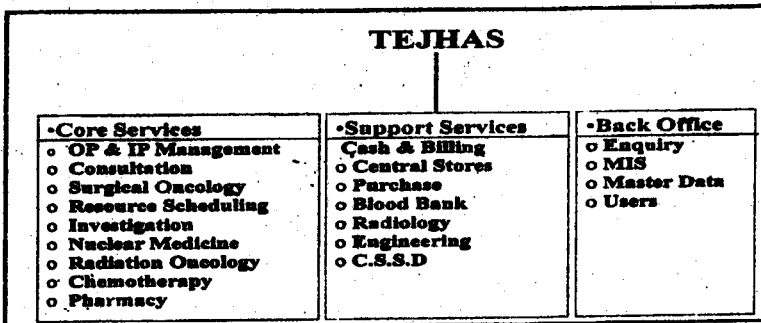
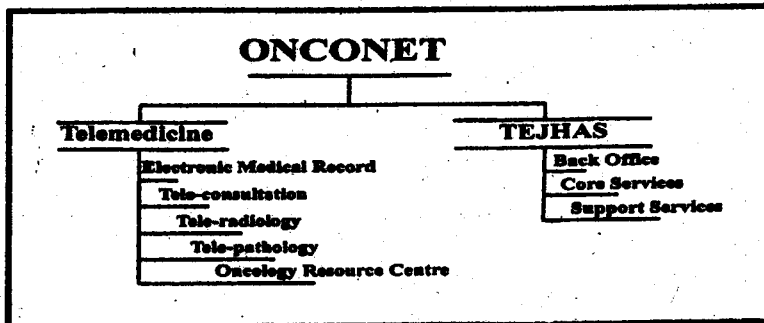
The Broad objective of TEJHAS - "Telemedicine Enabled Java based Hospital Automation System" was to streamline the treatment flow of a patient in the hospital, while allowing doctors and other staff to perform their task, in an optimized and efficient manner. ONCONET established a web enabled Hospital Information System at Regional Cancer Centre using high bandwidth connectivity with matching hardware and software and up-gradation and integration of backend systems and processes. This served as the backend for Telemedicine and included the optimization of RCC LAN, installation & configuration of Database Server and Application Server. Software modules for strengthening Hospital Information System at RCC were:

- Radiation Oncology System
- Chemotherapy System
- Surgical Oncology System
- Other supporting modules were also web enabled. For all other existing modules backend was ported from INGRESS to ORACLE.

The existing Hospital Information System uses a network of computers to gather, process, and retrieve patient care and administrative information for all hospital activities to satisfy the functional requirement of the users. TEJHAS is a Multi-tier Web Application developed using Java & J2EE Technologies with Oracle 10g Database & Application Server. A separate program is used for the Financial and Accounting function and Payroll Management System. The office financial accounting (OFA) and office management system (OMS) was not integrated with the Hospital Information System as they were developed using two different technologies.

Deliverables of Hospital Information System

As part of ONCONET project CDAC supplied the hardware for Hospital Information System which includes three XEON Servers, four PIV Servers, 80 thin clients, 20 PCs, printers, switches and the application software for web based HIS shown. The pictorial representation of the 20 modules is shown.



Achievements of Hospital Information System

Regional Cancer Centre Trivandrum has a huge databank of valuable patient data, which serves as an easy reference for all types of cancer. This valuable data can be used to develop a System for oncologists to evaluate the success rate of their decisions. Hence this project achieves safe, high quality, cost efficient health care. Patient data is captured from all departments of RCC and stored in a central database to make it available anytime, anywhere on the network.

REGIONAL CANCER CENTRE, TRIVANDRUM

No.Dir/119/2011/RCC

Date:03/09/2011

CIRCULAR

An I.T. Steering Committee of Regional Cancer Centre has been constituted with the following members.

- | | |
|---|----------|
| 1. Dr.K.Ramadas, Medical Supdt. | Chairman |
| 2. Dr.V.M.Pradeep, Prof.& Head, Nuclear Medicine | Member |
| 3. Dr.Aswin Kumar, Deputy Medical Supdt. | Member |
| 4. Dr.Jem Prabhakar, Addl.Prof.of Surgical Oncology | Member |
| 5. Shri.K.O.Mathal, Accounts Officer | Member |
| 6. Shri.S.V.Sasikumar, Purchase Officer | Member |
| 7. Shri.P.Rajesh, System Analyst | Member |
| 8. Shri.Sreekumar B, Clerk Gr.I | Member |
| 9. Smt.Neelima N, System Manager | Convener |

The scope and responsibilities of the committee are attached herewith.

**DIRECTOR**

To

The above members

IT Steering Committee

Scope, Responsibilities, and Process

08-Aug-11

To define strategies, policies, procedures, and monitoring of IT projects, it is proposed to form a IT Steering Committee for Regional Cancer Centre (RCC), Trivandrum. This document briefly describes the constitution, scope, and process for the IT Steering Committee

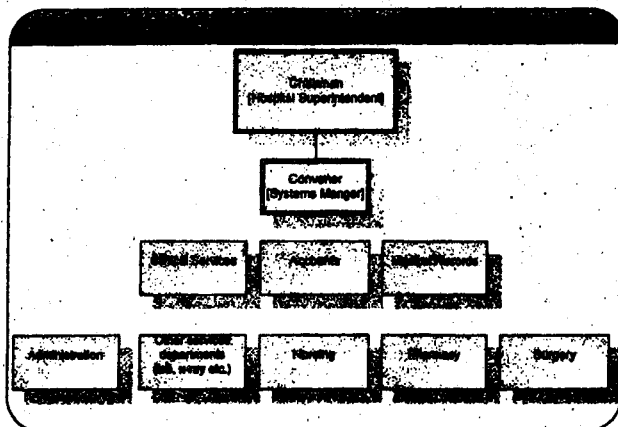
Overview

This document describes the procedures to be followed by the Information Technology (IT) Steering Committee members. These procedures will guide the committee in establishing IT policy and strategic plans, reviewing project proposals and results, resolving issues, and providing direction to project teams.

Organization and Reporting

The IT Steering Committee may be formed with members from all functional departments, with the Hospital Superintendent as Chairman Ex-Officio, and Systems Manager as Convener, Ex-Officio.

The committee is formed from members of all the major departments. However for improved efficiency, and ease of function, a compact core committee is formed with the major users of the HIS such as Clinical Services, Accounts, and Medical Records.



The Systems Manager may also act as the project manager to report the status to the steering committee for review.

Scope

The IT Steering Committee is responsible for establishing the IT policy and strategic plans for RCC. Once the initial policy is developed, the committee will periodically review and make updates to suite the changing needs of the organization. The committee will also develop the IT plan for each fiscal year. Most importantly, the committee is responsible for communicating both policy and plans to all concerned and enforcing policy. The various responsibilities of the committee are:

1. Review, and approve standards for Information Systems Department (ISD), and ensure that all projects adhere to the approved processes.

2. Review, prioritize and approve any requirements from the users.
3. Review the progress of tasks taken by the ISD, on a monthly basis.
4. Ensure projects are managed effectively and efficiently, and in accordance with the IT policy and procedures for the ISD.
5. Resolve issues or conflicts reported by the ISD or user departments.
6. Report to the director the status of the activities in ISD.
7. Identify, refine, and document IT needs for the organization, considering future needs and division's current direction.
8. Assist Project Manager in balancing project priorities and assessing impacts when delays are evident.
9. Assist Project Manager in managing risks as development efforts progress into critical phases and target dates approach.
10. Select user group members for advice based on knowledge, level of expertise, and availability.
11. Communicate potential improvement opportunities to ISD for further research if applicable.
12. When a major project continually indicates slippage, the Steering Committee may request a project assessment. The assessment will be assigned by the committee to an independent party to analyze the inefficiencies, determine the source, and make recommendations.

Process

The systems manager may submit a status report in the prescribed format to the chairman and members of the steering committee within 5 working days of every month.

The review meeting may be convened on any day before 10th or each month to discuss the status report.

Convener may invite the user group members for discussion about any new requirements or change in requirements.

During the review any requirements received from user departments may be discussed and decided.

The minutes of the meeting with the decisions taken and action items for the subsequent period should be circulated among the members and other stake holders if any.

The chairman may submit a comprehensive report to the director to inform the status of projects.

Escalation Procedure

Conflicts or issues among members should be resolved within the committee and addressed in a professional manner.

1. When conflicts or issues occur, the chairman will serve as the mediator to reach an agreement or resolve the issue.
2. When an issue cannot be resolved, the chairman will address the issue with the director.
3. The Director, with final authority to resolve issues, will reach a decision and communicate the results to the chairman or directly to the Steering Committee if necessary

Outline of Telemedicine project

ONCONET is an Integrated Tele-medicine solution for cancer treatment based on store and forward and real time concepts. This enables doctors at the nodes to practice telemedicine features like Tele-consultation, Tele-diagnosis, Tele-education, Tele-pathology, Tele-radiology etc. This covers technologies like video conferencing, capture, storage, transmission and sharing of histo-pathology and radiology images at remote locations along with Real-time patient data transfer between Regional Cancer Centre and its peripheral centers. The project ONCONET is aimed to establish the backbone network connectivity between Regional Cancer Centre and its five peripheral centers through Satellite communication using VSATs.

Objective of Telemedicine project

Onconet-Kerala is a telemedicine project, developed by CDAC, Thiruvananthapuram, and launched at Regional Cancer Centre, Thiruvananthapuram (RCC). The main objectives were;

- To provide remote medical service to distant nodal centers of RCC using the current and emerging communication networks.
- To establish an Oncology Network for providing Telemedicine services in cancer detection, treatment, pain relief, patient follow-up and continuity of care in peripheral centres (nodal centres) of RCC (at Kochi, Kollam, Kannur, Palakkad and Kozhencherry) which are manned by doctors and equipped with cytology services.
- To transmit and receive medical education programs with other centres.

Deliverables of Telemedicine project

1. Broadband network connecting RCC, Trivandrum and five nodal centers using VSAT and satellite link. This includes earth station, VSAT equipments and PCs.
2. Software modules for real-time patient data transfer between RCC and nodes. This include web-enabled HIS modules with ORACLE backend, Patient Follow-up Management software for real-time transfer of patient data between RCC and nodal centres.
3. High quality Videoconferencing equipments which includes powerful digital camera and 21" TV monitor with videoconferencing software at all the six centres
4. Tele-pathology setup at all six locations which include powerful Trinocular microscope, high-resolution digital camera, and PC with 21" monitor and high resolution Graphics card.

5. Software for capture of images from microscope, storage and retrieval of the images and online & offline transfer of the image to a remote location.
6. Tele-radiology set-up at all the five locations which include a high resolution X-Ray Scanner and software for scanning of X-ray images, storage and retrieval of the images and online & offline transfer of the image to remote location.
7. Hardware and software for Learning Resource Centre on Oncology
8. Software Modules for computerizing local applications at nodal centre
9. Hardware for Hospital Information System which includes three XEON Servers, four PIV Servers, 80 thin clients, and 20 PCs, printers, switches.
10. Application Software for web based HIS – 20 Modules

Achievement of Telemedicine project

1. Could establish High bandwidth connectivity between Regional Cancer Centre, Trivandrum and its peripheral centers at Kollam, Kozhancherry, Ernakulam, Palakkad and Kannur using satellite communication.
2. High quality Video Conferencing, Tele-pathology and Tele-radiology equipments are interconnected and software required for interfacing these equipments is developed.
3. Implemented Learning Resource Centre for Oncology -
 - To provide cancer related information to clinicians, researchers, health planners, health workers, administrators and patients
 - To enhance the productivity of health care professionals and reduce administrative costs of health care delivery
 - To provide overall support to cancer research and education and achieve equity in health care delivery
 - To facilitate quick access to all updated oncology information generated from time to time
4. CME Programmes were transmitted to various centers across India through Telemedicine network SKIMS, Srinagar, SRMC Chennai, Dr.Baruva Cancer Institute, Guvahati, RCC Cuttak, Civil Hospital Imphal, AIMS Kochi etc.
5. Major CME programmes received were
 - a. AROI annual conference from RCC, Ahmedabad
 - b. Multi modality H&N cancer care in new millennium, TMH, Mumbai.

OacoNET Usage - Yearly Report**Back****Report Date : 22/12/2011**

Year	Node	Total No: of Followup Patients	Total No: of Daily Clinic Patients
2001	Kochi	1071	0

2002	Kochi	1600	7
	Karunagapally	47	0
	Kannur	697	0
	Palakkad	25	0
	Kozhenchery	23	0

2003	Kochi	1499	7
	Karunagapally	102	0
	Kannur	523	0
	Palakkad	31	0
	Kozhenchery	38	0

2004	Kochi	911	0
	Karunagapally	148	0
	Kannur	226	0
	Palakkad	45	0
	Kozhenchery	65	0

2005	Kochi	1634	386
	Karunagapally	206	1
	Kannur	674	153
	Palakkad	98	0
	Kozhenchery	125	0

2006	Kochi	1620	872
	Karunagapally	149	0
	Kannur	620	0
	Palakkad	80	0
	Kozhenchery	135	0

2007	Kochi	1127	334
	Karunagapally	190	0
	Kannur	572	0
	Palakkad	54	0
	Kozhenchery	107	0

2008	Kochi	1223	5
	Karunagapally	166	4
	Kannur	683	0
	Palakkad	39	0
	Kozhenchery	87	0

2009	Kochi	1168	1
	Karunagapally	41	0
	Kannur	601	0
	Palakkad	62	0
	Kozhenchery	78	0

2010	Kochi	811	73
	Karunagapally	9	0
	Kannur	481	0
	Palakkad	58	0
	Kozhanchery	57	0

2011	Kochi	587	0
	Karunagapally	1	0
	Kannur	393	0
	Palakkad	16	0
	Kozhanchery	80	0

<http://192.168.1.169:8080/reports/r/>

**REGIONAL CANCER CENTRE, TRIVANDRUMAPURAM
COLLECTION REPORT**

19/02/2010 AND 19/02/2010

Item Name	Dr	Cr	PA HEAD
ADVANCE		108000.00	ADVANCE FROM PATIENTS
OCL MEMBERSHIP		8900.00	OCL MEMBERSHIP
CREDITCARDCHARGE		0.00	CREDIT CARD SW. CHARGES
INVESTIGATION/TREATMENT		636656.75	INVEST AND TRT CHARGES
KINGINICHEPPU		20600.00	KINGINICHEPPU
MEDICINE		1498926.63	MEDICINE RECEIPTS
POOR PATIENT FUND		2500.00	POOR PATIENT FUND
ADVANCE REFUND	16010.00		ADVANCE FROM PATIENTS
CREDIT BILLS	982888.05		CREDIT PATIENT CONTROL AC
DISCOUNT (FREE+GROUP)	13165.00		DISCOUNT (FREE+GROUP)
INVEST/TRT CANCELLED - CASH	3300.00		INVEST AND TRT CHARGES
INVEST/TRT CANCELLED - CREDIT	335.00		INVEST AND TRT CHARGES
MEDICINE CANCELLED - CASH	5683.50		MEDICINE RECEIPTS
MEDICINE CANCELLED - CREDIT	6783.00		MEDICINE RECEIPTS
NET CASH COLLECTED	1247418.85		CASH SUSPENSE A/C
ADVANCE SETTLED		146710.00	
Cancer Saraksha Scheme Govt. of Kerala		100000.00	
Ex-Servicemen Contributory		450564.05	
Total:	2275583.40	2275583.40	

DR		Investigation Account (as per original entry)				CR
Date	Particulars	Amount	Date	Particulars	Amount	
19/02/2010	To Cash suspense Account (Being amount of investigation charges cancelled) to bal c/d Total	3585 630455.75 634040.75	19.2.2010	By Cash Suspense A/c (Being the amount of investigation charges) Total By balance b/d	634040.75 634040.75 630455.75	
Dr		Medicine Account				CR
19/02/2010	To Cash Suspense A/C (Being the amount of cancelled medicine) Total To balance c/d Total	12466.5 1489026.15 1501492.65		By Cash Suspense A/c (Being the amount received for medicine sold) Total Total 19/02/2010 By Bal b/d	1501492.65 1501492.65 1489026.15	

Cash Suspense Account (after rectification)

DR		Investigation charges				CR
Date	Particulars	Amount	Date	Particulars	Amount	
19/02/2010	To Cash suspense Account (Being amount received as investigation charges) To balance c/d	3635 633021.75 636656.75	19.2.2010	By Cash Suspense (Being the amount of cancellation of investigation charges) Total By bal b/d	636656.75 636656.75 633021.75	
		Medicine Account				
19/02/2010	To Cash suspense Account (Being the amount of cancelled medicine) To bala c/d Total	12466.5 1486460.15 1498926.65	19.2.2010	By Cash suspense (Being the amount of medicine cancelled) Total Total By bal b/d	1498926.65 1498926.65 1486460.15	

Cash Suspense Account (as per original entry)					
DR					CR
Date	Particulars	Amount	Date	Particulars	Amount
19/02/2010	To Investigation and Treatment (Being amount received as investigation charges)	634040.75	19.2.2010	By Investigation (Being the amount of cancellation of investigation charges)	3585
19/02/2010	To Medicine (Being the amount received on sale of medicine) Total	1501492.65	19.2.2010	By Medicine (Being the amount of medicine cancelled) Total By balance c/d	12466.50 2119481.90 2135533.40
		2135533.40			
19/02/2010	To balance b/d	2119481.90			

Cash Suspense Account (after rectification)					
DR					CR
Date	Particulars	Amount	Date	Particulars	Amount
19/02/2010	To Investigation and Treatment (Being amount received as investigation charges)	636656.75	19.2.2010	By Investigation (Being the amount of cancellation of investigation charges)	3635
19/02/2010	To Medicine (Being the amount received on sale of medicine) Total	1498926.65	19.2.2010	By Medicine (Being the amount of medicine cancelled) Total By balance c/d	12466.50 2119481.90 2135583.40
		2135583.40			
19/02/2010	To balance b/d	2119481.90			

**REGIONAL CANCER CENTRE
THIRUVANATHAPURAM**

No. 975/Biometric/AdmnV/2010/RCC

Dt: 22/09/2010

CIRCULAR

Sub:- RCC - Estt. - New Biometric punching machine - registering finger print - reg.

A biometric punching system will be introduced in the Regional Cancer Centre w.e.f. October 2010 instead of the present system. Finger prints of all staff members including Nursing Assistants, Cleaners, Security staff, Project staff, DNB students etc. is to be collected.

Arrangements are being made to register the finger print of the staff members on 27/09/2010 and 28/09/2010 at the conference hall of Radiation Physics between 10.00 AM to 04.00 PM on 27/9/2010 and 28/09/2010.

All staff members are requested to register their finger print on the above dates.


ADMINISTRATIVE OFFICER

To

All Heads of Divisions (Circulation among staff)
Notice Board,
Public Relation Officer,
O.C.

REGIONAL CANCER CENTRE, THIRUVANANTHAPURAM

IT Policy

For all IT Assets and Users

Neelima N

September 11

This document describes the policies to be followed in the usage of IT assets, and framing procedures for IT implementation and usage.

Amendment Sheet

Version No.	Release Date	Authored by/ Modified by	Reviewed by	Authorized by	Remarks
0.1	10/09/2011	Neelima N			Draft
0.2	16/11/2011	Neelima N			Password policy section modified

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Introduction

This document describes the policy for implementation and usage of Information Technology (IT) at Regional Cancer Centre (RCC), Thiruvananthapuram.

The policies enlisted in this document is binding on purchase and usage of hardware, software, and networking in RCC.

Anything that is not specifically mentioned in this policy should be governed by the other relevant policies and procedures of the organization. For example, this document does not mention about the purchase of IT equipments, or recruitment and training of IT personnel, which are governed by the relevant policies and procedures of the organization.

In RCC, Thiruvananthapuram, Information Technology is used to improve the quality of services to patients, for better financial control, to generate accurate and timely information for decision making, help research departments with clinical data.

Primarily the IT needs are driven by the business requirements rather than the technology, though the advancements in technology as it fits to the objectives should be considered.

Since IT is considered as the core for patient services, clinical information, financial control etc., there should be adequate security in the information stored and processed using IT. So the below mentioned usage restrictions are to be followed.

Information Security

The aim of this policy is to protect the RCC, its clients, and employees from illegal or damaging actions by individuals, either knowingly or unknowingly.

Effective security is a team effort involving the participation and support of every employee and affiliate who deals with information and information systems and therefore it is the responsibility of every employee to know these rules, and to conduct their activities accordingly.

Computer Systems, Operating Systems, Software, Peripherals, Internet/Intranet facility, Network accounts, Email accounts etc. are the property of the organization. These systems are to be used only for business purposes in serving the interests of RCC and of its associates, suppliers, contractors etc.

Unless otherwise specified, this policy applies to the employees, consultants and other who work for RCC, including maintenance personnel affiliated with third parties. This policy applies to all equipment (software or hardware) that is owned or leased by RCC.

The IT Usage policies are subdivided into the following categories.

Acceptable Use Policy

Email Use Policy

Password Policy

Remote Access Policy

Data Retention Policy

Network Security Policy

Removable Media Usage Policy

System Maintenance Policy

Risk Assessment Policy

Information Sensitivity Policy

Appendix

a) Guidelines on Antivirus

Acceptable Use Policy

General

The data users create on the systems remains the property of RCC. The organization cannot guarantee the confidentiality of any personal or un-official information stored by any individual on any device belonging to RCC. The need to protect organization's data is of highest priority.

Employees are responsible for exercising good judgment regarding the reasonableness of personal use. The reporting authority should guide employees on effective use of the facilities.

Employees should not use the facilities to view or download videos, music, news sites, on-line trading, on-line sports coverage, online voice/text chatting etc. unless the official work demands it.

All confidential, sensitive and vulnerable data should be secured. If any such information needs to be sent by e-mail, that needs to be password protected document, and the password need to be informed by separate e-mail.

For security and network maintenance purposes, the Information Systems Department (ISD) will monitor systems, and may restrict network traffic at any time.

The network devices and systems will be audited periodically to ensure compliance with this policy.

Security and Proprietary Information

The organization data may be classified according to its level of sensitivity and confidentiality as defined by information sensitivity policy defined in this document. Employees should take all necessary steps to prevent unauthorized access to such data.

Keep passwords secure and do not share user accounts. Authorized users are responsible for the security of their passwords and accounts. Administrative level passwords should be changed immediately upon some unforeseen event or threat. User level passwords should be changed every six months.

Do not post materials to news groups, mail groups etc. using the organization email address, unless posting is in the course of official duties.

All hosts used by the employee that are connected to the RCC Internet / Intranet must have virus-scanning software with the virus database updated up-to-date.

Employees must use extreme caution when dealing with emails from unknown senders, which may contain viruses, e-mail bombs, or Trojan horse code. Do not open e-mails received from unknown origin. Consult ISD for assistance in this regard. See Email Use Policy for further details.

Unacceptable Use

The following activities are, in general, prohibited. Employees may be exempted from some of these restrictions during the course of their legitimate job responsibilities. Under no circumstances is an employee of RCC authorized to engage in any activity that is illegal under Local, State, National or International law while-utilizing the organization owned resources.

The lists below are by no means exhaustive, but attempt to provide a framework for activities, which fall into the category of unacceptable use.

System and Network Activities

Violations of laws or regulations regarding trade secret, patent or other intellectual property including the installation or distribution of "pirated" or other software products that are not appropriately licensed for use by RCC.

Unauthorized copying of copyrighted material including digitization and distribution of photographs, books or other copyrighted sources, copyrighted music, movies etc.

Exporting software, technical information, and technology, in violation of international or regional export control laws.

Introduction of malicious programs into the workstations, servers or network (e.g., viruses, worms, Trojan horses, e-mail bombs, etc.)

Revealing your account password to others or allowing use of your account by others. This includes friends, family and other household members through Internet or when work is being done at home.

Using a organization asset to actively engage in procuring or transmitting material, that promotes or attempts sexual harassment or hostile workplace environment in the user's local jurisdiction.

Making fraudulent offers of products, items, or services originating from the organization asset.

Effecting security breaches or disruptions of network communication. Security breaches include, but are not limited to, accessing data of which the employee is not an intended recipient or logging into a server or account that the employee is not expressly authorized to access. Disruptions include network sniffing, pinged floods, packet spoofing, denial of service, and forged routing information for malicious purposes.

Port scanning, network monitoring or security scanning is prohibited unless it is part of job responsibilities.

Circumventing user authentication or security of any host, network or account.

Using any program/script/command, or sending messages of any kind, with the intent to interfere with, or disable, a user's terminal, via any means, locally or via the Internet/Intranet.

Providing information about, or lists of, employee details to parties outside the organization.

Email and Communications Activities

Sending unsolicited email messages, including the sending of "junk mail" or other advertising material to individuals (internal or external) who did not specifically request such material (email spam).

Any form of harassment via email, telephone or paging.

Unauthorized use or forging of email header information.

Use of any other email address, other than that of the poster's account, with the intent to harass or to collect replies.

Creating or forwarding "chain letters", "Ponzi" or other "pyramid" schemes of any type.

Posting messages to large numbers of newsgroups (newsgroup spam).

Sending sensitive or confidential information related to organization or projects by plain e-mail.

Blogging

Blogging in an unprofessional or irresponsible manner. *[Limited and occasional use of organization's systems to engage in technical blogging is acceptable, provided that it is done in a professional and responsible manner, and does not otherwise violate organization's policy, and is not detrimental to organization's best interests, and does not interfere with an employee's regular duties.]*

Revealing any RCC confidential or proprietary information, trade secrets or any other material when engaged in blogging.

Engage in any blogging that may harm or tarnish the image, reputation or goodwill of the organization and/or any of its employees.

Making any discriminatory, disparaging, defamatory or harassing comments when blogging.

Attributing personal statements, opinions or beliefs to RCC when engaged in blogging. *[If an employee is expressing his/her beliefs or opinions in blogs, the employee may not, expressly or implicitly, characterize themselves as a representative of RCC. Employees assume any and all risk associated with blogging.]*

Use of copyrighted or export controlled materials, organization logos and any other RCC intellectual property in connection with any blogging activity.

Email Use Policy

Prohibited Use

RCC email system shall not be used for the creation or distribution of any disruptive or offensive messages, including comments about race, gender, colour, disabilities, age, religious beliefs and practice, political beliefs, or nationality. Employees who receive any emails with such offensive contents from any employee should report the matter to their reporting authority immediately.

Do not send any sensitive / confidential information as e-mail text. Such information should be put in a password protected document, and sent as attachment.

Personal Use

Using a minimal amount of organization resources for personal emails is acceptable, but personal emails shall be saved in a separate folder from work related emails. Sending chain letters or joke emails from RCC email account is prohibited. Virus or other malware warnings should be forwarded to the ISD for verification and circulation, and should not be forwarded to others. Similarly, general informative e-mails or requests should be forwarded to the HR Department for circulation. These restrictions also apply to the forwarding of mail received by an employee.

Monitoring

RCC employees shall have no expectation of privacy, other than for maintaining confidentiality of the official information in anything they store, send or receive on the organization's email system. The organization may monitor messages without prior notice.

Password Policy

General

All system-level passwords (e.g., administrator, root, application administration accounts, etc.) must be changed on at least a quarterly basis.

All user-level passwords (e.g., email, web, workstation, etc.) must be changed at least every six months.

User accounts that have system-level privileges granted through group memberships must have a unique password from all other accounts held by that user.

All user-level and system-level passwords must conform to the guidelines described below, and applications being used should enforce these guidelines within the application.

Guidelines

General Password Construction Guidelines

Passwords are used for various purposes at RCC. Some of the more common uses include: user level accounts, server accounts, web accounts, email accounts.

Weak passwords have the following characteristics:

- The password contains less than six characters
- The password is a dictionary word
- The password is a common usage word such as:
 - Names of family, pets, friends, co-workers, etc.
 - Computer terms and names, commands, sites, companies, hardware, software.
 - Birthdays and other personal information such as addresses and phone numbers.
 - Word or number patterns like aaabbb, zyxwvuts, 123321, etc.
 - Any of the above spelled backwards.
 - Any of the above preceded or followed by a single digit (e.g., secret1, 1secret)

Strong passwords have the following characteristics:

- Contain both upper and lower case characters (e.g., a-z, A-Z)
- Have digits and punctuation characters as well as letters e.g., 0-9, !@#\$%^&*()_+|~-'\|:;"/>?,.,)
- Are at least six alphanumeric characters long.
- Is not a word in any language, slang, dialect, jargon, etc.
- Are not based on personal information, names of family, etc.
- Passwords should never be written down or stored on-line. Applications should store the passwords in encrypted form.
- Create passwords that can be easily remembered by the owner. One way to do this is create a password based on a song title, affirmation, or other phrase.

Password Protection Standards

Where possible, don't use the same password for various access-needs. For example, select a separate password to be used for windows account and a Linux account.

Do not share organization's passwords with anyone. All passwords are to be treated as sensitive, confidential organization information.

Here is a list of "don't's":

- Don't reveal a password over the phone to ANYONE
- Don't talk about a password in front of others
- Don't hint at the format of a password
- Don't reveal a password on questionnaires or security forms
- Don't share a password with family members
- Don't reveal a password to co-workers while on vacation

If someone demands a password, direct them to the ISD.

Change passwords at least once every three months (except system-level passwords which must be changed monthly).

Do not repeat last six passwords when changing passwords.

Applications should lock the user after three consecutive un-successful login attempts.

Lock the user if not logged in for 30 days continuously.

If an account or password is suspected to have been compromised, report the incident to ISD.

Use of Passwords for Remote Access Users

Access to RCC Networks via remote access is to be controlled using encrypted strong passwords.

Remote Access Policy

General

It is the responsibility of the employees, consultants and maintenance personnel affiliated with third parties with remote access privileges to RCC's network to ensure that their remote access credentials are securely handled.

The user is responsible to ensure that, by using his/her connection, nobody violates any organization policies, perform illegal activities, or use the access for outside business interests. The user bears responsibility for the consequences should the access is misused.

Requirements

Remote access to RCC's network is not usually allowed to its employees, consultants or maintenance personnel. However, with the specific request from the senior management, or consultants, or maintenance personnel access could be given to the network through VPN.

Secure remote access is strictly enforced via password authentication or public/private keys with strong pass-phrases. For information on creating a strong pass-phrase see the Password Policy.

At no time should any user provide their login to anyone, not even to family members, or close associates.

A user with remote access must ensure that the system used for connecting to the organization's resources is not part of any other networks like file sharing networks etc.

Data Retention Policy

General

If any project is done, after project closure the project folder is archived into CD/DVD and kept in the safe custody of the ISD.

The source control repository is backed-up automatically to a secondary server every night.

The system state (OS and application configuration, user information, DNS database etc.) is backed-up weekly to a secondary server.

As disaster recovery measure, on the last working day or every week, a copy of all the backups written into a removable media and transferred to a distant location.

To satisfy any legal requirements, firewall logs, and mail server logs are archived for a period of six months.

Guidelines for data retention

Backups are scheduled after business hours to make sure those users have signed off of their workstations and that all files are closed and available for the nightly backup.

Verify that all backups are complete prior to the beginning of the next business day.

Verify that all backup media is stored in a secure place.

Network Security Policy

General

The network shall be protected by the firewall and all access to internal network including VPN will be allowed only through the firewall. The firewall will be configured to restrict all inbound traffic to the Demilitarized Zone (DMZ) and internal network until it is permitted.

The web server and FTP server if any are protected by the Firewall and will be in the Demilitarized Zone (DMZ).

Access to all the systems in the network is restricted with login credentials. All users of the network will have unique login ID and password.

All the systems in the network will have antivirus programs with online protection enabled. The virus definitions should be updated weekly in all the systems in the network.

All the data transfers/deliveries are done through email/FTP and access to the FTP servers are controlled by username and password, which is known to the ISD. The files so transferred should be password protected which is informed by the owner of the file to the recipient by separate e-mail.

Users are provided with admin-rights to their respective workstations for the smooth execution of their job responsibilities. But they shall not download or install software or utilities without permission from ISD.

Physical accesses to all critical servers like Firewall, Mail server, Domain controller etc. are permitted only for ISD.

Unauthorized entry to the Server room is strictly prohibited.

Removable Media Usage Policy

No one should use a removable media in his/her workstation. If any information is to be copied, that can be done by the ISD on exceptional circumstances.

System Maintenance Policy

Updates Types

Several types of updates may be required on any computer and all the types should be considered for the below listed computer system components.

They Include:

- i) The computer BIOS.
- ii) The operating system.
- iii) Application updates.

Update Checking

The need for updates is determined using

- Online update scanning of the system to determine available updates not yet applied
- Reviewing posted security flaws and patches for each type of update applicable to the system

The review of posted security flaws and patches should always be used for the computer operating system and applications. The manufacturer website should be used and there may also be other appropriate sites posting relevant bulletins.

Update Vulnerability Types

The update considerations should address vulnerabilities caused by:

- Code errors
- Mis-configurations not covered by patches

Update Information

Before applying updates, administrators should know:

- The addressed vulnerability
- What previous patches are required or what system update is required

- What programs are affected by the change
- What may be wrecked by the change
- How to undo the change
- Be sure you have data backup before applying a patch on a system

All patches approved for client computers or applied to client computers should be documented.

Server Updates

Utmost care should be taken in applying any Server updates

The ISD shall determine the following:

- Whether the update applies to the computer system under consideration.
- Whether the update is safe to apply or whether it will make or break an application or some other part of the operating system.

A test environment is recommended to determine whether updates may impair functionality prior to implementation of production environments. The ability to provide a test environment and thoroughness of determining whether any functionality is broken by the update will vary depending on available resources.

Workstation Updates

Workstation updates may be done using tools depending on the type of workstations and their operating systems.

Windows workstations may be updated using the Microsoft online update tool.

Unix based workstations if any may be updated using open source tools like "Yum" or using reviews of security flaws and their patches on trustworthy websites and groups.

Taking out or bringing in

If any computer is taken out for repair or for returning to the vendor or sold out, then the system department should ensure that the data and applications in the computer is erased permanently. Similarly, when any computer is taken in from outside on purchase or by any other means, the ISD should ensure that the hard disk or any other media does not contain any data, information, or applications.

Any such devices, hardware or software should be taken out or brought in should be under the responsibility of the ISD and should ensure that it is maintained properly.

Risk Assessment Policy

Risk assessments shall be conducted by the management. The execution, development and implementation of remedial programs is the joint responsibility of management and ISD. Employees are expected to cooperate fully with any Risk assessments being conducted on systems for which they are held accountable. Employees are further expected to work with the Risk Assessment Team in the development of a remedial plan.

Information Sensitivity Policy

The Sensitivity Guidelines below provides details on how to protect information at varying sensitivity levels.

General: General corporate information; some personnel and technical information

Access : To everyone interested in RCC's activities.

Restricted: Business, financial, technical information

Access : RCC employees and non-employees with signed non-disclosure agreements who have a business need to know.

Distribution : RCC Network, RCC email, RCC FTP.

Storage : Individual access controls for electronic copies. Hard copies should be kept locked.

Destruction : Electronic copies should be erased. Hard copies should be physically destroyed.

Confidential: Any classified data, trade secrets & marketing, operational, personnel.

Access : Only those individuals designated with approved access.

Distribution : Delivered direct.

Storage : Information should be stored in a physically secured computer. Hard copies should be kept locked in a physical secured area.

Destruction : Electronic data should be expunged/cleared. Hard copies should be physically destroyed by shredding or burning.

Enforcement

The responsibility for implementing Information Security Policy belongs to ISD. Responsibility for ensuring that new and existing systems remain in compliance with this policy resides with the management. Any employee found to have violated this policy may be subject to disciplinary action.

Every employee joining the organization should be educated about the security policies and practices during the induction. Further, refresher trainings about the security policies and practices should be conducted at least once in every year.

Any violation or threat to the information security or any un-acceptable usage noticed by any employee should be brought to the notice of the reporting manager and/or ISD without delay. On receipt of such notice, the ISD should take remedial / preventive action immediately.

Reporting Mechanism

In the occurrence of any breach of information security policy or procedures, it should be reported to the ISD directly under intimation to the head of department or through the head of department.

ISD should take remedial action without delay under intimation to the Chairman, IT Steering Committee, and the Director.

Training

In order to keep the employees updated and alert of the information security policy and procedures to be followed the ISD will organize training on these policies and related procedures once in every six months, or whenever any updates is made to the policy or procedures, whichever is earlier. Such training should keep the list of candidates attended and repeat training should be conducted for those could not attend the training.

Audit

The information security audits will be conducted once in every six months. The audit report will be submitted to the IT Steering Committee. The ISD should close any non-conformity reported and report to the IT Steering Committee within one week of the submission of such report.

Preventive Measures

In case of any security break or hazard occurs, the ISD should form a team of technical members and IT Steering Committee to evaluate the reasons for the incident, and come out with the preventive measures. Such preventive activities should then form part of the information security policy and procedures as far as applicable.

Appendix – Guidelines on Anti-Virus Process

Recommended processes to prevent virus problems:

- New viruses are discovered almost every day. Users should ensure that their workstations are installed with antivirus and get updated regularly.
- NEVER open any files or macros attached to an email from an unknown, suspicious or untrustworthy source. Delete these attachments immediately, then "double delete" them by emptying your Trash / Recycle Bin.
- Delete spam, chain, and other junk email without forwarding.
- In no case an executable from an un-known source be downloaded and executed.
- Avoid Drive/Folder sharing with write access unless there is absolutely a business requirement to do so.
- Always scan removable media, USB device etc. for viruses before using it.
- Mail server must have an anti-virus scanning application that scans all mails destined to and from the mail server. The mail server must also be equipped with spam blocking programs. These programs should be frequently updated.
- Send requests to the Systems Administration Department for achieving critical data and mails on a regular basis.
- If ever running a product/test application conflicts with the anti-virus software, run the application in a clean machine which is disconnected from the network with the assistance from the ISD.
- If you suspects that your workstation is infected with a virus program or if you find that the online virus protection on your workstation is disabled/compromised, either unplug the LAN cable or power down the system immediately and inform the ISD.

APPENDIX III

STATEMENT FROM C & AG'S REPORT

Statement showing the requirement of staff and the actual strength available

(Reference: paragraph 1.1.9.1; Page 13)

Name of Institution	Psychiatrist			Clinical Psychologist Social Worker			Staff Nurse			Assistant		
	Required	Available	Excess (+) Short fall (-) (Percentage %)	Required	Available	Excess (+) Short fall (-) (Percentage %)	Required	Available	Excess (+) Short fall (-) (Percentage %)	Required	Available	Excess (+) Short fall (-) (Percentage %)
MHC, Thiruvananthapuram (Bed strength :507)	51	12	(-) 39 (76)	51	5	(-) 46 (90)	169	50	(-) 119 (70)	102	30	(-) 72 (71)
MHC, Thrissur (Bed strength :361)	36	6	(-) 30 (83)	36	2	(-) 34 (94)	120	35	(-) 85 (71)	72	22	(-) 50 (69)
MHC, Kozhikode (Bed strength: 473)	47	17	(-) 30 (64)	47	6	(-) 41 (87)	158	57	(-) 101 (64)	95	28	(-) 67 (71)
District Hospital, Kollam (Bed strength :18)	2	2	0	2	0	(-) 2 (100)	6	0	(-) 6 (100)	4	0	(-) 4 (100)
District Hospital, Ernakulam (Bed strength :12)	1	2	(+) 1 (100)	1	3	(+) 2 (200)	4	0	(-) 4 (100)	3	0	(-) 3 (100)
THQ Hospital, Chirayinkil (Bed strength :6)	1	1	0	1	0	(-) 1 (100)	2	0	(-) 2 (100)	1	0	(-) 1 (100)
THQ Hospital, Mavelikara (Bed strength :6)	1	1	0	1	0	(-) 1 (100)	2	0	(-) 2 (100)	1	0	(-) 1 (100)
THQ Hospital, Tirur (Bed strength :10)	1	1	0	1	0	(-) 1 (100)	3	0	(-) 3 (100)	2	0	(-) 2 (100)

(Source: Replies furnished by the department)