Chapter-2

Performance Audit of Andhra Pradesh Health Sector Reform Programme

Health, Medical and Family Welfare Department

2.1 Introduction

Government implemented a Department for International Development (DFID)[1] supported Health Sector Reform Programme (APHSRP) during July 2007 to June 2010. APHSRP was within mission period of National Rural Health Mission (2005-12) and most of the outputs and key reform measures initiated by the State Government under APHSRP were aspirations outlined in NRHM. Major outputs envisaged in health sector and key reforms outlined by APHSRP to achieve these outputs, are detailed below.

Outputs	Key Reforms
Improved access to quality and responsive services, especially in underserved areas	• Universal access to health care with focus on preventive care • Fixed day health services and help line (104 services) • Emergency response (EMRI-108 services) • Aarogyasri community health insurance scheme • Community volunteers (ASHAs)
Setting up institutional mechanisms for community participation	• Functional Village Health and Sanitation Committees (VHSCs) • Functional Hospital Development Services
Improved governance and management of AP health sector	• Restructuring of Health and Family Welfare Department • Reduction of vacancies of medical personnel, including in tribal and remote areas • Integrated monitoring system for service delivery, human resources and financial information
Strengthened financial management systems	• Medium Term Expenditure Framework • Improved accounting and auditing systems • Improved procurement practices • Formation of Andhra Pradesh Health, Medical and Housing Infrastructure Development Corporation (now APMSIDC) • Improvement of drugs supply

2.1.1 Responsibility Centres

There are nine Heads of Departments functioning under the administrative control of Principal Secretary, Health, Medical and Family Welfare Department. Primary and Tertiary health care are dealt with by Directorate of Public Health & Family Welfare and Directorate of Medical Education, whereas secondary health care is handled by Andhra Pradesh Vaidya Vidhana Parishad (APVVP). Construction of buildings for primary health care/hospitals/medical colleges, etc. is the responsibility of APMSIDC[2] with executive divisions at district level. Procurement of machinery & equipment and drugs is centralised at APMSIDC, Hyderabad.

[1] Government of United Kingdom
[2] Erstwhile AP Health Medical Housing Infrastructure Development Corporation (APHMHIDC)

2.2 Audit Framework

2.2.1 Audit Objectives

This performance audit was taken up to assess whether reforms in health sector initiated in 2007 and key policy changes enunciated by Government to achieve the outputs outlined in reforms have been implemented effectively in terms of

- creation of adequate infrastructure and other envisaged services to facilitate ***access to quality and responsive health services***;
- setting up institutional mechanisms for community participation;
- optimal efficiency in health care delivery system, including manpower planning through ***improved governance and management of health sector***; and
- strengthened financial management systems.

2.2.2 Audit Criteria

Audit findings were benchmarked against the criteria sourced from the following:

- Health Sector Reform Strategy Framework
- Budget of State Government during the relevant period
- IPHS norms for primary and secondary health care; MCI norms for tertiary health care
- NRHM guidelines
- Orders/instructions/circulars issued by GoI and State Government from time to time
- AP Financial Code

2.2.3 Audit Scope and Methodology

Audit scope involved a review of various interventions of State Government in health sector and implementation of various programmes in pursuance of the reform process as well as areas of convergence with NRHM during the period 2009-14. An Entry Conference was held in March 2013 with Principal Secretary to Government, Health, Medical and Family Welfare (HM&FW) Department wherein audit objectives, methodology, scope and criteria, audit sample, beneficiary survey, etc. were discussed and agreed to. Audit methodology involved scrutiny of relevant files/records at Secretariat department, offices of various HoDs concerned in HM&FW Department, issue of questionnaires, discussions with concerned officials at various levels, data analysis, joint inspections at field level and beneficiary survey. Exit Conference was held with Government representatives in November 2014 to discuss audit findings and replies of Government have been incorporated at appropriate places in the report.

2.2.3.1 Audit Sample

Based on a pilot study in the capital district of Hyderabad, six districts were selected for audit sample – two each from the three regions of the State. Audit sample varied with regard to each of the interventions of State Government in health sector based on

expenditure and risk parameters in the districts. Overall, 426 health units[3] were selected for detailed study across seven districts[4]. List of units selected for detailed audit scrutiny is given in ***Appendix-2.1.***

Audit Findings

2.3 Health care set up

Health care services in the State are implemented through the following three tiers:

- **Primary health care services**, provided through Primary Health Centres (PHCs) and Sub-centres (SCs)
- **Secondary health care services**, provided through referral units i.e. Community Health Centres (CHCs), Area Hospitals (AHs) and District Hospitals (DHs)
- **Tertiary health care services**, provided through teaching hospitals attached to Medical Colleges and Super Speciality Hospitals

Public health facilities available in the State during the five year period 2009-14 were as follows.

Table-2.1

Health facility	2009-10	2010-11	2011-12	2012-13	2013-14
District hospitals	16	16	17	17	17
Area hospitals	59	59	58	59	59
Community Health Centres	171	172	363	308	308
Primary Health Centres	1571	1571	1709	1709	1709
Sub-centres	12522	12522	12285	12285	12522
Allopathic dispensaries	130	143	26*	26	26

Source: Outcome Budget of respective years

**Number reduced as dispensaries under the control of DoH were converted to PHCs/CHCs*

Audit test checked 134 PHCs (out of 605) and 248 SCs (out of 3,897) of primary health care; 18 CHCs (out of 88), seven Area hospitals (out of 30) and all the five District[5] hospitals of secondary health care and seven Medical colleges and their attached Teaching hospitals in tertiary health care in the sampled districts to assess adequacy of infrastructure facilities available. Audit findings are discussed below.

2.3.1 Primary health care

PHC, headed by a Medical Officer, is the key unit in primary health care system. It was conceived to provide medical care and family welfare services, including maternity and child health (MCH) services, immunization programme, promote health education, training, lab-testing for diagnosis of diseases, etc.

Health care services are extended to village level through Sub-centres, with each PHC providing for about 6 - 10 SCs within its jurisdiction. As per NRHM guidelines, there

[3] SCs: 248; PHCs: 134; CHCs: 18; AHs: 7; DHs: 5; Medical Colleges: 7; Teaching Hospitals: 7
[4] Chittoor, East Godavari, Hyderabad, Kurnool, Mahabubnagar, Visakhapatnam and Warangal
[5] Out of seven sampled districts, District Hospitals were not available in Visakhapatnam and Warangal districts

should be one SC for a population of 5,000 (3,000 in tribal areas), one PHC for 30,000 (20,000 in tribal areas) and one CHC for one lakh population (80,000 in tribal areas). Audit scrutiny revealed shortage of health care units at all levels as can be seen from the number of health care units existing *vis-à-vis* norms as of March 2014 given below.

Table-2.2

Health facility	Requirement as per population norms		Units as of 1 April 2005 (start of NRHM)		Units as of 31 March 2014		Shortfall	
	Plain Areas	Tribal Areas	Plain Areas	Tribal Areas	Plain Areas	Tribal Areas	Plain Areas	Tribal Areas
Sub-centres	15733	1973	12522	NA	11167	1355	4566	584
Primary Health Centres	2622	296	1570	NA	1465	244	1157	73
Community Health Centres	787	74	215	NA	277	31	510	40

Source: Report of Common Review Mission and Outcome Budget 2013-14 NA: Not available

Despite the shortfall (29 *per cent* in plain areas and 30 *per cent* in tribal areas), no new SCs were set up in the State during the entire mission period of NRHM (2005-12). Only 139 new PHCs were established during the last five years, resulting in 42 *per cent* shortfall (44 *per cent* in plain areas and 25 *per cent* in tribal areas) *vis-à-vis* norms. Similarly, only 64 *per cent* CHCs (65 *per cent* in plain areas and 54 *per cent* in tribal areas) were functioning against the requirement as per population norm.

There were shortages in PHCs and SCs in all the sampled districts. Shortage of PHCs was high in Visakhapatnam district (53 *per cent*) followed by East Godavari and Kurnool (48 *per cent*) districts. In respect of SCs, shortage was high in Visakhapatnam (45 *per cent*) followed by Kurnool (38 *per cent*).

With regard to tribal areas, shortage of PHCs and SCs was high in Chittoor district (100 *per cent*) followed by Mahabubnagar (44 and 58 *per cent*) and Warangal (37 and 39 *per cent*) districts.

Government stated (December 2014) that in the case of PHCs and CHCs it was proposed to fill the gap in a phased manner duly observing the procedural requirements. Also district level exercise was currently being carried out to address this problem.

2.3.1.1 Lack of amenities in Primary Health Centres

In 56 *per cent* PHCs, transport facility was not available to facilitate access to emergency referral services and 53 *per cent* of PHCs do not have telephone facility to answer emergency calls. Further, generators/inverters were not available in 25 *per cent* PHCs, drinking water was not available in 16 *per cent* PHCs, Operation Theatres were not in use in 30 *per cent* PHCs and labour room with facilities were not available in 16 *per cent* PHCs.

Government sanctioned upgradation of 1,224 SCs and 249 PHCs under NRHM during 2005-14. However, only 654 SCs and 114 PHCs have been upgraded.

Government replied (December 2014) that the Government is operating 108-Ambulance services and 104-Fixed Day Health services to reach out to the need on highways, in rural and tribal belts and also provided mobile phone facility and internet connectivity to almost all the PHCs and with these measures, there was no dearth for transport and communication facilities at PHC level.

However, from the information furnished to Audit by Director of Health, it is evident that referral facility was not available in 56 *per cent* of PHCs.

2.3.2 Secondary health care

Community Health Centres (CHCs) are First Referral Units (FRUs), with area hospitals and district hospitals being the other referral units. There are 308 CHCs in the State and there is dual control over them with both AP Vaidya Vidhana Parishad (APVVP) and Director of Health (DoH) handling their functioning (APVVP: 121, DoH: 187). Government orders (August 2010) to bring all CHCs under the control of DoH to strengthen and revitalise secondary health care system were not complied with as of March 2014.

2.3.3 Tertiary health care

Medical colleges attached to teaching hospitals form part of tertiary health care. Medical Council of India (MCI) prescribed norms for infrastructure, manpower, equipment and drugs and medicines required in medical colleges and their teaching hospitals. Test-check of seven medical colleges and their attached teaching hospitals revealed that most of these colleges do not comply with prescribed norms (***Appendix-2.2***).

Government replied (December 2014) that it was seized of the issue of shortage of certain equipment in some of the Government teaching hospitals and enumerated the various steps/measures taken for all round improvement in the provision of essential equipment in all the Teaching (District) hospitals.

2.4 Physical infrastructure

Audit scrutiny of infrastructure in health care facilities *vis-à-vis* IPHS norms revealed shortages. Details with regard to test checked health centres are tabulated below.

Table-2.3

Sl. No.	Facilities	SCs	PHCs	CHCs/ DHs/AHS*
	Total number audited	**248**	**134**	**30**
1	No. where Ambulance was not available	NA	NA	17
2	No. with no electricity connection	112	Nil	Nil
3	No. without standby power supply	248	55	7
4	No. where separate ward for male and female was not available	NA	118	3
5	No. where waiting rooms were not available	NA	57	5
6	No. where there was no water supply	98	15	Nil
7	No. without telephone connection	206	73	5
8	No. where no residential accommodation was available for staff	159	233**	12
9	No. where prescribed quantity of medicines were not available	248	134	30

**includes data in respect of 18 CHCs, seven Area Hospitals (AHs) and five District Hospitals (DHs)*

***residential accommodation not available in respect of MOs in 119 PHCs and Staff Nurses in 114 PHCs;* NA: Not applicable

None of the test checked units complied with the requirement of equipment as per norms. Non-compliance was especially high with regard to standard surgical sets in CHCs, Treadmill, CTG Monitor, 500 M.A. X-ray machines, Dehumidifier in AHs and ECG, CTG monitors, Paediatric operation table, etc. in DHs. Details are given in ***Appendix-2.3.***

Government replied (December 2014) that the IPHS norms are advisory in nature and to a certain extent these have been fulfilled in the health care institutions. Government also assured that necessary steps would be taken to provide the physical infrastructure and equipment to the health care units.

However, the instances of lack/shortage of equipment pointed out in Audit pertain to essential equipment required as per IPHS norms.

2.5 Fixed Day Health Services

NRHM brought up the concept of Mobile Medical Units (MMUs)[6] to break down barriers in accessing primary health care by rural people. State Government introduced (February 2008) Fixed Day Health Services (FDHS) under NRHM to enhance delivery of health care services to habitations beyond 3 to 5 km away from PHCs/CHCs through MMUs.

Under this scheme, health care services are to be provided through MMUs once-a-month on a fixed day to all habitations (two habitations per day to cover 1,500 population in each habitation) to facilitate primary screening for pregnant women and children and monitoring chronic diseases as well as distribution of drugs for chronic diseases. This programme is being implemented in the entire State with 475 MHUs.

Health Management and Research Institute (HMRI) a non-profit organisation was entrusted with implementation of these services under PPP mode. HMRI managed these services up to October 2010 and thereafter, these were transferred[7] to District Medical and Health Officers (DM&HOs) of respective districts. Against total funds of ₹478.37 crore (including opening balance of ₹113.50 crore) provided during 2009-14, an amount of ₹409.76 crore was expended on FDHS during the period 2009-14.

2.5.1 Non-provision of services at habitations

Approximately four crore population is estimated to be living in habitations beyond three km of PHCs/CHCs. MMU is required to cover a population of 3,000 in eight hours a day. As per records, total number of habitations[8] in the State was 72,134. Audit observed that only 35,610 (50 *per cent)* habitations were covered during operation of FDHS from March 2008 to October 2010.

During Exit Conference (November 2014), Government attributed the non-coverage of remote habitations on all days to financial constraints.

Audit scrutiny of records in the sampled districts revealed that in East Godavari district, although Mandapeta (No. of habitations: 551, population: 8.79 lakh) and Yeleswaram (No. of habitations: 139, population: 5.33 lakh) clusters had more number of habitations,

[6] also known as mobile health units - MHUs
[7] due to strike by HMRI staff and other administrative reasons
[8] Data regarding number of total habitations beyond three kilometres of PHC/CHC was not furnished by CFW

only one MMU each was provided, making it impossible to comply with the scheme guidelines of covering all habitations in a month. Similarly in Kotauratla and Chodavaram clusters (Visakhapatnam district), coverage of habitations reduced to 415 and 452 in 2013-14 against 615 and 973 habitations covered during 2012-13. With regard to Kurnool, Warangal and Ranga Reddy districts, relevant particulars were not furnished by DM&HOs.

Some Governmental feedback indicated that there was a proposal for increasing FDHS vehicles so as to provide one vehicle for each mandal instead of one for two mandals presently in operation.

2.5.2 Deficiencies of equipment in MHUs

In the sampled districts, Audit observed the following:

(i) As part of FDHS programme, LCD units are required to be provided in MHUs in order to create awareness among people in habitations. However, in Ranga Reddy district, LCDs and DVDs were not used in MHUs and were detached and placed at cluster offices, thus defeating the purpose of procuring them. Non-availability of bed, tents, inverter; intercom and AC; damaged footboard/ladder, etc. were also observed in Audit.

(ii) Physical verification of an MHU provided to Thorrur cluster (Warangal district) revealed damaged tyres, non-working of engine battery, fire extinguishers, etc.

(iii) In Chittoor, Visakhapatnam and Kurnool districts, inverters and ACs provided to vans were not in working condition.

2.5.3 Database analysis

As per norms, each habitation should be covered 12 times in a year. Audit analysis of data-dump for the period January 2012 to December 2013 provided by Commissioner of Family Welfare (CFW) revealed that out of 23,098 villages covered during 2012, 22,931 villages were covered less than 12 times (on fixed days) during the year. Similarly, during 2013, out of 23,773 villages, 21885 villages were covered less than 12 times during the year.

In the sampled districts, out of 7,216 villages, FDHS coverage was less than 12 times in 6,681 villages[9] during 2012 and in 6,695 villages[10] during 2013.

Government in its reply (January 2015) attributed the low coverage to frequent disturbances, bundhs, strikes and agitations in the State.

2.6 Emergency Response Services

One of the important components of health sector reforms in the State is rural emergency health transport service, popularly known as '108 Service' which is designed to provide immediate transportation of patients in need of critical care and trauma, and accident victims.

[9] Visakhapatnam: 1,125; East Godavari: 815; Kurnool: 1,150; Chittoor: 1,133; Mahabubnagar:1,432 and Warangal: 1,026
[10] Visakhapatnam: 1,215; East Godavari: 789; Kurnool: 1,141; Chittoor: 1,116; Mahabubnagar: 1,448 and Warangal: 986

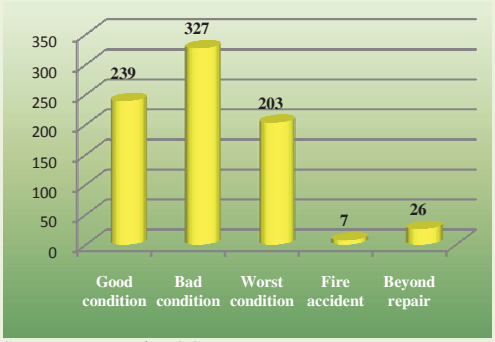
Within the State, ambulance service is provided on the basis of geographical segments comprising about 1.3 lakh population per segment and one ambulance is positioned for each segment to cater to emergency health transportation needs. Currently, 802 ambulances (752 in operation and 50 kept as reserve) are available for emergency transport services for 752 segments. Government entrusted (April 2005) the responsibility of implementation of this service to Emergency Management and Research Institute (EMRI), a non-profit organisation, under PPP mode by providing ambulances and required medical equipment. During the period 2009-14 (up to March 2014), out of ₹487 crore provided for this service, ₹479 crore was expended.

2.6.1 Scheme implementation

2.6.1.1 Replacement of ambulances

MoU of September 2011 envisaged replacement/refurbishment of ambulances yearly in order to provide uninterrupted emergency services. Scrutiny of records relating to status/ condition of ambulances during 2012-13 available with CFW revealed the following.

Chart 2.1: Number of vehicles



Source : Records of CFW

Although replacement of vehicles was envisaged in MoU, CFW could replace only 220 between September 2012 and May 2013. Further analysis revealed that 66 vehicles were still on road even after their replacements. Scrutiny also revealed that there were non-operational (off-road) ambulances ranging from 111 to 330 for period August 2009 to February 2012 due to accidents/breakdowns/ refurbishments/minor body repairs.

During the Exit Conference, Government's response (November 2014) to the issue of a large number of off-road vehicles (in 108 service) due to repairs/non-replacements, was that efforts were already on to replace the off-road vehicles. Further, an action plan has been drawn up to procure 278 new ambulances to substitute old ambulances requiring replacement.

2.6.1.2 Inconsistencies in database

Audit analysis of data dump for the period 2009-14 (up to December 2013), provided by CFW, revealed inconsistencies like non-capturing of 'call-to-scene' time, 'scene-to-destination' date, incident location, caller phone number, victim name, informer name, invalid categorising of emergency calls, invalid hospital-id, etc., as detailed below:

(i) Audit observed that in 2.07 lakh records, 'call-to-scene' arrival date and time was not recorded; in 55.63 lakh records, 'scene-to-destination arrival time' date was captured as '00-00-0000'; in 28,116 cases, incident location/landmark was shown as 'null' and in 72,123 cases, informer name was not captured.

(ii) Emergency calls have been grouped under three categories *viz.,* Medical, Police and Fire. It was however, observed that during the five year period, 31.02 lakh cases were grouped under category '0'.

(iii) In 'Dispatch Remarks' table, which contains information about type of emergency and remarks, no description was assigned for ID_No. There were 6.91 lakh records in database under this category.

(iv) In 56.39 lakh records pertaining to 2011-12 and 2013-14, hospital-ID was mentioned as '0' in 53 *per cent* and 32 *per cent* cases respectively. Therefore, it could not be established if the concerned patients requiring emergency medicare were admitted to hospital or not.

(v) Victim Info table contains details about each victim for every incident/call ID. However, in 22.44 lakh cases, victim name was not captured.

(vi) In 'call-incident-info' table, which contains details about call time, incident location, caller information, etc., caller phone number was not found in 6.20 lakh records. It was also observed that incident-mandal-ID was invalid in 25,196 records. In the absence of critical information like Mandal ID, the possibility of deploying ambulance from the nearest location is difficult.

Government attributed (January 2015) the inconsistencies in database to data entry errors and assured that every care and precaution is being taken to improve the quality of the data and look into variation in data among various databases.

2.6.1.3 Non-provision of Automatic Vehicle Location Tracking (AVLT) System

As per MoU, all ambulances under 108-Services should be tracked online through Automatic Vehicle Location Tracking (AVLT) System and an amount of ₹2.01 crore was provided in MoU for the purpose during 2011-12. Scrutiny however, revealed that no such AVLT system was provided due to administrative delays and tendering procedures.

Government in January 2015 responded that the matter was under active consideration to go for fresh tenders.

Absence of AVLT System in 108-vehicles renders emergency response difficult since one of the important features of this system is to deploy ambulances in a judicious manner to provide immediate succour to the victim.

2.6.2 Releases to service provider

As per MoU, funds should be released to service provider in advance on a quarterly basis, in respect of operational expenses (OPEX) which should be based on actuals and subject to ceiling limit envisaged in the schedules appended to MoU. It was also stipulated in MoU that average percentage of on-road vehicles per day should not be less than 90 *per cent* (i.e. 722) of total vehicles.

It was however, observed that no specific saving clause was incorporated in MoU in case of shortfall in number of on-road vehicles against the stipulation. It was also observed that there is no consistency in the information/data available with CFW and the database

submitted by the service provider about average number of on-road vehicles for the years 2012-13 and 2013-14. Details of month-wise average number of on-road vehicles are given below.

Table-2.4

Month	Average number of on-road vehicles			
	2012-13		2013-14	
	As per database	As per CFW	As per database	As per CFW
April	903	708	746	723
May	729	708	811	722
June	733	708	794	730
July	734	715	791	640
August	747	715	775	686
September	763	715	795	720
October	816	740	782	739
November	764	724	780	746
December	762	723	786	732
January	794	729	NA	732
February	750	722	NA	730
March	746	727	NA	724

Source: Database and Records of CFW NA: Not Available

Due to inconsistency in number of on-road vehicles, actual deployment of vehicles could not be vouchsafed in Audit. With regard to releases of funds, CFW is making payments by limiting the claim amount to maximum admissible amount. As releases were not linked with number of vehicles deployed and were being made as per SoEs, genuineness of claims admitted could not be vouchsafed.

Government in its reply (January 2015) stated that the number of on-road vehicles could vary due to difference between actual 'ready to ply' vehicles and number of vehicles assigned. It was further stated that payments are made strictly as per MoU.

Reply is not satisfactory since as per the MoU, maximum admissible amount was worked out per ambulance per month basis. However, the SoEs submitted by EMRI included lumpsum amounts expended under various components[11] and did not contain number of vehicles operated. In this scenario, Government was left with the only option of relying on SoEs and restrict the releases to maximum number of operational ambulances (i.e. 752). It is thus evident that the payments were being made on the basis of SoEs without linking to actual number of vehicles operated.

2.6.2.1 Deficiencies in inspection of Ambulances

As per CFW instructions (May 2012), DM&HOs of respective districts are required to inspect at least 25 *per cent* of ambulances in their jurisdiction and submit reports to CFW regarding status of vehicle, deficiencies/shortage of equipment/medicines.

Scrutiny however, revealed that no such reports were received in CFW from DM&HOs. Audit scrutiny in the sampled districts revealed the following.

[11] *viz.*, ambulance repair and maintenance, fuel cost, expenses for tyres, salaries, administrative expenses, etc.

(i) In Visakhapatnam district no supervision was undertaken by DM&HO till date.

(ii) Though DM&HOs, East Godavari and Kurnool districts, stated (June 2014) that ambulances were being inspected, inspection reports were not furnished to Audit.

(iii) DM&HO, Warangal district stated (July 2014) that during their inspection of 40 vehicles, shortage of equipment like laryngoscopes, mobile ventilators, mobile defibrillator, endotracheal tubes was observed in all the ambulances.

Government replied (January 2015) that, during the recent past the DM&HOs are submitting the inspection reports in the prescribed format indicating the status of the ambulances.

2.7 Aarogyasri Health Insurance

One of the key reforms envisaged under State health sector reform programme was health insurance. Provision of health insurance was also one of the requirements of NRHM.

Rajiv Aarogyasri (RA) was unveiled in April 2007 as a flagship health insurance scheme of State Government with the objective of providing cashless quality medical care to all BPL families for treatment of identified diseases involving hospitalisation, surgeries and therapies through empanelled network hospitals by providing financial protection up to ₹2 lakh in a year for treatment of serious ailments. In August 2007, Aarogyasri Health Care Trust (AHCT) consisting of Minister for HM&FW, Secretaries (HM&FW, Finance and Rural Development departments), Commissioners (Family Welfare and APVVP), Directors (Medical Education, Health and Nizam's Institute of Medical Sciences), Financial advisor and CEO, AHCT was set up under the Chairmanship of the Chief Minister for effective implementation of this scheme.

Initially (April 2007), 163 diseases in six systems[12] were identified for coverage under this scheme. This number was later extended (July 2008) to 330 in 13 systems[13] under Aarogyasri-I (AS-I) through insurance coverage mode[14]. Subsequently, AS-II was launched (July 2008) with an additional 612 surgical and medical diseases taking the total number of treatments to 942 under the scheme. As regards treatments facilitated under AS-II, payment was being released by Trust directly to empanelled hospitals. Against ₹6,574 crore made available to the Trust since inception of the scheme in 2007 to 2014 (up to March 2014) funds amounting to ₹6,164 crore were expended.

2.7.1 Scheme implementation

2.7.1.1 Empanelment of Network Hospitals

Health Care Institutions (HCIs), which fulfil prescribed criteria relating to infrastructure, manpower and equipment, and conform to service and quality standards, become eligible for empanelment with AHC Trust. As of April 2014, 478 HCIs (Government: 152, Private: 326) have been empanelled by the Trust (referred to as network hospitals (NWHs)).

[12] Heart, Cancer, Neurosurgery, Renal Diseases, Burns and Poly trauma cases not covered by Motor Vehicle Act.
[13] Heart, Lung, Liver, Pancreas, Renal diseases, Neurosurgery, Paediatric congenital Malformations, Burns, Post Burns contracture surgeries for factual improvement, Cancer treatment – (a) Surgery, (b) Chemo therapy, (c) Radio therapy, Poly trauma, Prosthesis (Artificial limbs), Cochlear Implant Surgery with Auditory – Verbal therapy
[14] Star Health and Allied Insurance Company, Chennai was selected as the Insurance Company for providing insurance cover for treatments

Records of 100 NWHs were test checked in Audit to verify their compliance with prescribed criteria and the modalities followed by AHC Trust in empanelling these. Findings of test-check are given below:

(i) In eight hospitals, infrastructure requirements like functioning of obstetric unit, labour room with support services of paediatrician, ICU, post operative ward, etc. were not complied with. These institutions should not have therefore, been empanelled.

Government in its reply (November 2014) stated that, out of eight hospitals mentioned, four were in Government sector and that the criterion was slightly liberal to give a boost for increased participation of maximum number of Government hospitals in the scheme.

(ii) Trust did not prescribe any periodicity for inspection of empanelled hospitals. Further, renewal of empanelment is not linked with inspection. Inspection reports were not signed by the Trust authorities in respect of eight hospitals.

Government stated (November 2014) that detailed guidelines for empanelment were formulated and empanelment would be done only after registration of online application and physical inspection. It was further stated that instructions have been reiterated among all concerned to submit inspection reports with due authentications.

Two cases of network hospitals are illustrated below.

PES Medical Institute and Research Hospital, Kuppam (Chittoor): This hospital, which was empanelled for treatment under 24 categories[15], was providing treatment only under 11 categories[16] due to non-availability of super specialists in other categories. Scrutiny also revealed that twenty seven patients who were undergoing Haemodialysis in this hospital under Aarogyasri were not treated since November 2012 due to non-availability of doctor with Masters Degree (MD) in Nephrology.

Government confirmed (November 2014) the non-availability of dialysis treatment in the hospital due to absence of Nephrologist (mandatory for performing dialysis to the patients) and stated that the hospital has been advised to engage a Nephrologist.

MNR Hospital, Sangareddy: This hospital was not providing treatment for ENT, Ophthalmology, OBG, Urology, Plastic surgery and General Medicine categories although it was empanelled for treatment under these categories.

Government stated (November 2014) that as per 'online records', the hospital was not empanelled for the specialities *viz.,* ophthalmology, ENT, Urology, etc. However, audit scrutiny of the agreement entered into by the Hospital with the Trust in December 2011 revealed that the hospital had assured the availability of these procedures and specialist services for extending treatment.

[15] (i) General Surgery (ii) ENT (iii) Gynaecology and Obstetrics (iv) Orthopaedics (v) Ophthalmology (vi) Surgical Gastroenterology (vii) Paediatric Surgery (viii) Genito Urinary Surgery (ix) Neuro surgery (x) Plastic Surgery (xi) Polytrauma (xii) Prostheses (xiii) Critical care (xiv) General Medicine (xv) Infectious Diseases (xvi) Paediatric Intensive care (xvii) Neonatal Intensive care (xviii) Paediatric General (xix) Cardiology (xx) Nephrology (xxi) Neurology (xxii) Pulmonology (xxiii) Dermatology and (xxiv) Gastroenterology

[16] Nos.(i), (ii), (iii), (iv), (viii), (xi), (xiii), (xiv), (xvi), (xvii) and (xviii) in footnote above

2.7.1.2 Cochlear Implant Surgery

Government decided (December 2007) to extend financial assistance to totally hearing challenged children (below 12 years) of BPL families to undergo cochlear implant surgery (cost: ₹5.20 lakh) in identified network hospitals. Surgery is to be followed by Auditory Verbal (AV) therapy (cost: ₹1.30 lakh) starting with switching on implanted instrument after one month from the date of discharge which is to be continued for a period of one year in a phased manner. Payment of ₹54.91 crore has been made in respect of Cochlear treatments in 1,056 cases up to March 2014.

Physical verification of 114 records in Government ENT Hospital, Koti, Hyderabad on sample basis by Audit team revealed the following:

(i) In nine cases, hospital had applied and obtained ₹5.80 lakh for AV therapy. However, names of beneficiaries were not found on rolls in attendance register of AV therapy.

Government stated (November 2014) that, despite repeated pursuance, the concerned have not attended AV therapy and that the claim of the Hospital was not entertained.

However, as per documentary evidence, the hospital has preferred the claim on this account and the same was paid by the Trust. Therefore possibility of fraudulent payment cannot be ruled out.

(ii) In eight cases, beneficiaries have attended AV therapy training after lapse of more than six months from the date of switching on cochlear implant device. As such, the veracity about usefulness of expenditure (₹52 lakh) incurred on treatment for these beneficiaries is doubtful.

Government replied (November 2014) that all the AV therapy cases are being attended to, as scheduled.

Thus, final outcome of cochlear implantation surgeries could not be assessed due to non-follow-up of mandatory AV therapy modules in a majority of cases.

2.7.1.3 Inconsistencies in Database

Audit scrutiny of data dump consisting of 25.09 lakh records provided by the Trust for the period April 2007 - March 2014 revealed the following inconsistencies:

(i) In 1.36 lakh cases, address is incomplete and keyed in as “nil”, “nillnill” and “0”.

(ii) Instead of indicating white card number or referral card or Aarogyasri Card, there were junk characters in 41 records (amount involved: ₹22.92 lakh).

(iii) In 3.96 lakh cases (where single surgery/procedure is performed), pre-authorisation amount did not match with prescribed surgery package rate. Pre-authorisation amount was less (₹83.53 lakh) in 2.20 lakh cases and was more (₹51.09 crore) in 1.76 lakh cases.

Government in its reply (November 2014) stated that in certain emergencies, permissions were obtained over telephone for certain procedures requiring higher amounts. However, no evidence could be produced to Audit to prove that this was the situation in the above cases.

(iv) In 1.56 lakh cases, claim amount was more (extent: ₹121.36 crore) than the rate fixed for treatments.

Government replied (November 2014) that this was based on approval of enhancements. However, it was observed from the database that out of 1.56 lakh cases, enhancement was approved in 2,717 (out of 1.56 lakh) cases only.

(v) In 2.97 lakh cases, date of discharge was captured incorrectly and in 5,308 cases, date of discharge was prior to the date of admission. Audit cannot vouch for the veracity or correctness of the amounts paid (₹26.86 crore) in these cases.

Government admitted (November 2014) that despite taking every care such type of data entry errors still persisted.

2.7.1.4 Data analysis and Physical verification of selected Network Hospitals

The data provided by Trust for the period 2009-14 was analysed in Audit, and records of 12 Government and 18 Private hospitals (provided by the hospitals on the directions of Aarogyasri Trust) were selected for detailed study based on the number of cases and expenditure involved. Issue-wise deficiencies observed in the test checked network hospitals are given below.

Table-2.5

Sl. No.	Issue	Sample size	No. of cases	Amount (₹ in lakh)
1	Ration cards not matched Government reply: This was due to issuance of temporary cards, clerical errors, dependence on the data of Civil Supplies Department, addition of the members in the family, etc.	403	114	57.27
2	Claim paid more than pre-authorisation amount Government reply: This is attributable to the necessity of performing additional surgery not anticipated and these were approved subsequently through enhancement workflow. It was however, observed from the records that all these 16 cases involved single surgery only and there was no enhancement approval for these cases.	299	16	2.58
3	Claims paid on surgeries performed prior to empanelment of hospital Government reply: All these cases were performed in Government hospitals. It was however, observed in Audit that all these cases relate to private hospitals only. Further, the reply does not address the systemic lapse with regard to performing surgeries before empanelment of hospitals.	6630	152	39.30
4	Claim paid more than package amount preferred Government reply: This was due to co-morbidities cases such as HIV, HBSAG, HCV positive cases and based on approval of enhancements. It was however, observed that there was no enhancement approval for these cases.	233	22	3.98

Sl. No.	Issue	Sample size	No. of cases	Amount (₹ in lakh)
5	Collection of money from beneficiaries Government reply: Such cases were not cleared unless the hospitals refunded the money to the patients and required proof thereof was produced. However, the records produced to Audit for scrutiny did not reveal any such refunds to the Aarogyasri patients.	743	30	2.99

2.7.2 Non–conduct of Software Audit

Since Aarogyasri programme uses networked applications, it is imperative that the reliability of the automated processes and security of the system is subject to quality assurance and security audits. Although Trust resolved (October 2009) to conduct a third party audit through Software Techniques Quality Control (STQC), a GoI organisation, and paid ₹10 lakh (March 2012) audit has not commenced as of December 2013 i.e. even after the lapse of three years from the date of passing resolution and nearly two years after releasing payment.

Government replied (November 2014) that the matter is being pursued vigorously with STQC for early completion.

2.8 Community Volunteers (ASHAs)

One of the core components of NRHM and adopted by State Government in its health sector reforms is provision of a trained female community health worker called Accredited Social Health Activist (ASHA) in every village. ASHAs are to be engaged in every village in the ratio of one per 1,000 people so as to act as an interface between the community and public health system.

As of March 2014, against the requirement of 84,666 ASHAs as per norms, 70,700 posts of ASHAs were sanctioned by Government against which, 64,827 ASHAs were in position leaving a shortfall of 19,839 ASHAs (23 *per cent*) in the State.

All the sampled districts had shortfall in number of ASHAs *vis-à-vis* norms except for Visakhapatnam district. The shortfall ranged from 6 *per cent* (Mahabubnagar and Warangal) to 74 *per cent* (Hyderabad).

Government in its reply (January 2015) stated that the shortage in ASHA positions has been appropriately addressed by filling up the vacancies. Reply is not factual.

2.8.1 ASHAs Drug kits

All ASHAs should be provided with a drug kit containing AYUSH and allopathic formulations and these kits should be refilled periodically. As per the guidelines issued (November 2009) by GoI, 17 types of drugs were to be refilled in ASHAs drug kit. It was however, observed that drug kits provided to ASHAs were not refilled during 2010-11 in all the sampled districts. During the years 2011-12 and 2012-13 due to shortage of budget, against 17 types, kits were refilled with only four types of drugs.

Government in its reply (January 2015) stated that the frequency of refilling and the number of identified drugs is being improved.

2.8.2 Immunization

Immunization of children against vaccine preventable diseases *viz.,* tuberculosis, diphtheria, polio and measles, etc. has been the corner stone of Universal Immunization Programme (UIP). Review of targets and achievements during the five year period 2009-14 revealed that over 95 *per cent* of immunization targets relating to primary immunization[17] of children below one year were met. In the test checked districts, the achievement of immunization ranged between 86 *per cent* (Warangal district) and 106 *per cent*[18] (East Godavari district) during the above period.

With regard to secondary immunization however, there was shortfall in achievement of the targets as shown below.

Table-2.6

(in lakh)

Year	DT		TT (at age of 10)		TT (11 to 16 years of age)	
	Target	Achievement	Target	Achievement	Target	Achievement
2009-10	18.95	13.08	23.64	14.40	17.23	12.24
2010-11	19.12	11.64	24.06	14.08	17.39	11.74
2011-12	13.80	10.89	14.47	12.53	16.40	11.63
2012-13	13.90	10.12	14.57	11.77	16.51	11.54
2013-14	14.02	10.66	14.69	11.91	16.65	11.38

Source: Records of CFW; DT: Diphtheria and Tetanus Toxoids; TT: Tetanus Toxoid

Shortfall in achievement of the targets in secondary immunization ranged from 21 to 39 *per cent* for DT, 13 to 41 *per cent* for TT (10 years) and 29 to 32 *per cent* for TT (11 to 16 years of age) during the period 2009-14.

CFW replied that due to migration of children of 16 years to other places on account of transfers, education, etc. and lack of knowledge of parents about the importance of booster doses, the coverage of children under secondary immunization was low.

Government in its reply (November 2014) assured to review secondary immunization at all levels.

2.8.3 Terminal methods

Terminal methods of family planning include Vasectomy for males and Tubectomy for females. Review of performance of sterilisations during the five year period 2009-14 under various methods revealed that 82 *per cent* of targets for sterilisations were achieved.

It was observed that family planning operations were not conducted in 43 (32 *per cent*) test checked PHCs due to non-availability of regular doctors, non-functioning of operation theatres, non-availability of required equipment, etc.

[17] Bacille Calmette-Guérin - BCG (popularly known as Tuberculosis), Measles, Diphtheria, Pertussis (whooping cough) and Tetanus (DPT) , Oral Polio Vaccine (OPV)
[18] Excess achievement was stated to be due to migration of public from other areas

Government replied (November 2014) that awareness for vasectomy (being the less used method) is created through the IEC activities. It was further stated that old and obsolete equipment in the health facilities would be replaced with new equipment to improve the performance on the desired lines.

2.9 Institutional Mechanisms for Community Participation

2.9.1 Village Health and Sanitation Committees

As a part of Health Sector Reforms in the State, Village Health and Sanitation Committees (VHSCs) were to be formed to ensure (i) Optimal use of health services in villages (ii) improve participation of VHSCs in maintaining quality health and sanitation services and (iii) prevent occurrence of epidemics in villages. Scrutiny revealed that 21,916 VHSCs were formed covering all villages/Gram Panchayats/Wards in the State.

2.9.1.1 Budget and Expenditure

A budgetary requirement of ₹115.64 crore was proposed in PIPs for the years 2009-10 to 2013-14. An amount of ₹106.56 crore was sanctioned and against this, ₹102.24 crore was released and ₹86.62 crore was expended.

Audit scrutiny revealed that, during the five year period 2009-14, 15 to 57 *per cent* of funds released were not utilised. In the sampled districts, unspent balances ranged between 7 and 36 *per cent*. Non-utilisation of funds released indicate that various activities as envisaged were not being undertaken by VHSCs.

Further, as per guidelines, grants should be released to VHSCs in two instalments based on their performance. Performance reports were however, not produced to Audit despite specific request. It was observed that although unspent balances remained at the end of each year, further funds were being released to VHSCs resulting in accumulation of balances.

Government stated (December 2014) that with the introduction of PFMS (Public Financial Management System) and the existing system of online transfer, there was more access to review and monitor utilisation of funds released for the intended purpose.

2.9.2 Hospital Development Services

As a part of Health Sector Reforms in Andhra Pradesh and as per Government orders of December, 2006, Hospital Development Societies (HDS) are to be formed by all Teaching Hospitals, District Hospitals, Area Hospitals, CHCs and PHCs, to take care of hospital development services. Accordingly, HDSs were formed in all the institutions in the State.

As per Government orders, all receipts on account of hospital stoppages, miscellaneous receipts, etc. are to be credited to bank account of HDS. The HDS is empowered to incur expenditure from this fund for providing basic amenities, minor repairs, purchase of essential drugs, etc., after approval by HDS Committee. The Committee was to meet at least once in a quarter to review society's performance including utilisation of funds. Against ₹90.84 crore received, an amount of ₹68.52 crore (75 *per cent*) was expended.

Non-utilisation of allocated funds indicate that various activities as envisaged were not being undertaken by HDSs.

2.9.2.1 Deficiencies in HDSs

Test-check of HDS records revealed the following:

- In nine[19] institutions, HDSs meeting were not conducted quarterly.

  Institutions attributed the non-conduct of HDS meetings to a variety of reasons, *viz.,* retirements and camping of Medical Superintendents, pre-occupation of the Chairman/members, lack of quorum, etc.

- In eight[20] institutions, accounts were not audited by Chartered Accountants and were in arrears for one to nine years.

- In four[21] hospitals HDS funds amounting to ₹48.87 lakh were lying in FDRs/Savings account without utilisation.

  Hospitals attributed non-utilisation of funds to non-conduct of HDS meetings and assured that the matter would be brought to the notice of Director of Medical Education.

- In Gandhi Hospital, Secunderabad, EMD/SD register was not maintained by HDS. As a result, EMD of ₹10 lakh was wrongly refunded to a person who was not entitled to it. Government did not offer specific remarks with regard to recovery of the amount.

Government attributed (December 2014) the non-conduct of HDS meetings to expiry in 2011 of the tenure of heads of the HDS committees. It was also stated that the need for timely convening of HDS meeting for taking up the mandated activities for utilising the earmarked amounts has been impressed upon all concerned.

It was assured that necessary steps would be initiated to conduct the audit of the accounts of HDS by Chartered Accountants.

2.9.3 Health clusters

In August 2010, Government ordered establishment of 360 Community Health and Nutrition Clusters (CHNC) across the State to strengthen public health care system for effective prevention and management of diseases, strengthening referral system and improving quality of hospital care in conformity with Indian Public Health Standards (IPHS). Each CHNC is to provide comprehensive health services to one to three lakh people through a network of 4 to 10 PHCs.

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[19] Gandhi Hospital, Secunderabad; Osmania General Hospital, Hyderabad; Government Hospital for Mental Care, Visakhapatnam; Government General Hospital, Anantapuram; Niloufer Hospital, Hyderabad; DCHS, Mahabubnagar; Modern Government Maternity Hospital, Petlaburj, Hyderabad; District Hospital, Chittoor; MGM Hospital, Warangal

[20] Gandhi Hospital, Secunderabad; Osmania General Hospital, Hyderabad; Government Hospital for Mental Care, Visakhapatnam; Government General Hospital, Anantapuram; Government General Hospital, Kakinada; DCHS, Mahabubnagar; District Coordinator for Health Services, Chittoor; MGM Hospital, Warangal

[21] Government Hospital for Mental Care, Visakhapatnam (₹28.23 lakh); Government Nizamia General Hospital (Unani), Hyderabad (₹7.01 lakh); Regional Eye Hospital, Visakhapatnam (₹4.07 lakh); District Coordinator for Health Services, Chittoor (₹9.56 lakh)

While 360 CHNCs were formed across the State, these did not comply with the norms specified. Audit scrutiny revealed that 22 CHNCs catered to more than 3 lakh population; 21 CHNCs to less than one lakh people and 102 CHNCs comprised less than four PHCs. In the sampled districts, seven CHNCs cater to more than three lakh population, one CHNC to less than one lakh and 29 CHNCs have less than four PHCs.

During the Exit Conference (November 2014), Government accepted the audit observation and stated that the clusters are being strengthened.

2.10 Manpower planning

2.10.1 Primary Health Centres

As per IPHS, PHCs conducting less than 20 deliveries per month should be provided with one Medical Officer (MO) and three Staff Nurses, and those conducting 20 and above should be provided with two MOs and four Staff Nurses. Audit observed that in the test checked PHCs though there was no shortfall in MOs, there was a shortfall of 67 *per cent* in the cadre of Staff Nurse. Shortage of Staff Nurse was high in Hyderabad district (88 *per cent*) followed by Visakhapatnam (63 *per cent*) and East Godavari (46 *per cent*) among the sampled districts.

Scrutiny of records of **134** test checked PHCs in the seven sampled districts revealed that shortage in posts of Pharmacists was high in Hyderabad (84 *per cent*), followed by Chittoor (31 *per cent*).

2.10.1.1 Sub-centres

As against 25,044 Auxiliary Nurse Midwife (ANM) and 12,522 Multi-Purpose Health Assistants (MPHAs) required for 12,522 Sub-centres in the State, 7 *per cent* ANM posts and 62 *per cent* MPHAs posts were vacant.

Scrutiny of records of **248 Sub-centres (SCs)** test checked in the six sampled districts revealed the following.

Norm	Status
Auxiliary Nurse Midwife (ANM) Each SC should be provided with two ANMs.	Against 248 ANMs 110 ANM posts were vacant.
Multi-Purpose Health Assistant (MPHA) – Male One MPHA (Male) should be provided for each SC.	MPHA (Male) was not available in 170 (69 *per cent*) out of 248 test checked Sub-centres.

2.10.2 Secondary Health Care

Andhra Pradesh Vaidya Vidhana Parishad (APVVP) was established (November 1986) by an Act (Act 29 of 1986) solely to manage secondary level hospitals in the State. Under APVVP, 233 hospitals[22] (including 26 dispensaries) are functioning in the State as of March 2014.

[22] District Hospitals (17); Area Hospitals (59); Community Health Centres (121); Speciality Hospitals (10) and Dispensaries (26)

Against the requirement of 20,006 posts in all cadres in the State as per IPHS norms, in 207 hospitals, only 12,907 posts (65 *per cent*) were sanctioned by Government. Out of these, only 9,472 posts were filled up. Thus, there was a shortage of 10,534 posts (53 *per cent*) *vis-à-vis* norms. Vacancies in key posts are shown in Table below.

Table-2.7

Sl. No	Cadre	Requirement (as per norms)	Sanctioned	Men in Position	Vacancy w.r.t. norms (percentage)
1	Civil Surgeon	923	400	226	697 (76)
2	Civil Assistant Surgeon	3063	1567	955	2108 (69)
3	Staff Nurse	6536	3828	3351	3185 (49)
4	Pharmacist	654	565	414	240 (37)
5	Head Nurse	1074	543	449	625 (58)
6	Radiographer	340	228	167	173 (51)
7	Lab-Technician	1080	282	188	892 (83)
8	Dark Room Assistant	340	228	101	239 (70)
9	Physiotherapist	92	12	5	87 (95)
10	Theatre Assistant	654	168	88	566 (87)
11	Male/Female Nursing Orderly (MNO/FMNO)	1735	1123	834	901 (52)

Source: Records of APVVP

Status of manpower in key posts of Civil Surgeons, Civil Assistant Surgeons, paramedical officers, etc. in the test checked districts is given below:

- Vacancies in Civil Surgeons posts was high in Warangal district (89 *per cent*) followed by East Godavari and Mahabubnagar (84 *per cent*).
- Vacancies in Civil Assistant Surgeon posts were high in East Godavari and Mahabubnagar (79 *per cent*) followed by Kurnool (76 *per cent*).
- Physiotherapists were not available in any of the sampled districts.
- Vacancies in Theatre Assistants was higher in Visakhapatnam (95 *per cent*) followed by East Godavari and Mahabubnagar (88 *per cent*).
- Against the requirement of 540 posts of MNOs in the sampled districts, 269 posts (50 *per cent*) were vacant.

Government response was (November 2014) that necessary proposals to fill up the vacant posts in all cadres on regular/contract basis had been submitted by the department in December 2013 and that action would be taken to obtain proposals afresh for sanction of additional posts as per IPHS norms.

2.10.3 Tertiary Health Care

Requirement of posts as per MCI norms, sanctioned by Government and actually operated is given below.

Table-2.8

Posts	Number of Posts			
	Sanctioned	Men in position	Vacancy*	Percentage
Teaching posts				
Professor	757	584	173	23
Associate Professor	634	474	160	25
Assistant Professor	2081	1573	508	24
Tutor	150	58	92	61
Total	**3622**	**2689**	**933**	**26**
Para Medical				
Nursing Staff	5831	4810	1021	18
Others (Pharmacist, Lab Technician, Radiographer, Theatre Assistant, etc.)	3919	2282	1637	42

Source: Records of DME **Vacancy with reference to sanctioned strength*

Scrutiny of records of seven test checked medical colleges and teaching hospitals revealed that there was shortage in the cadre of Professor in S.V. Medical College, Tirupati (30 *per cent*) followed by Kurnool Medical College (25 *per cent*) and Kakatiya Medical College, Warangal (22 *per cent*). Shortages in the cadre of Associate Professor ranged from 9 *per cent* in Osmania Medical College, Hyderabad to 47 *per cent* in S.V. Medical College, Tirupati and shortages in the cadre of Assistant Professor ranged from 9 *per cent* in Andhra Medical College, Visakhapatnam to 27 *per cent* in Kakatiya Medical College, Warangal.

Government accepted (January 2015) that there were vacancies in some cadres and attributed the same to seniority matters and some other disruptions in the State. Government however, assured that direct recruitment process is being undertaken to fill the maximum number of vacancies in different categories.

2.11 Health Management Information System

To obtain reliable information with regard to various critical indicators – both financial as well as health related, and provide decision support to enable effective monitoring and accountability at all levels of health care delivery system, Government envisaged (October 2008) setting up and institutionalising a vibrant Health Management Information System (HMIS) including Financial Management Information System (FMIS). The web enabled HMIS was to be implemented in 2,500 locations across the State, including 2,200 hospitals up to PHC level.

Government entered into an agreement with National Institute for Smart Government (NISG), a public sector undertaking, in September 2008 for suggesting a suitable application in this regard at a cost of ₹1.21 crore. Administrative approval for the proposal was however, accorded later in October 2008.

Audit scrutiny revealed that NISG was paid ₹93.67 lakh in three instalments between October 2008 and September 2009. Although NISG submitted Request For Proposal (RFP) to Government in December 2009, it was yet to be approved by Government as of March 2014. Reasons for non-approval of RFP were not forthcoming from the records produced to Audit.

Thus, despite expending ₹93.67 lakh, the envisaged HMIS was not yet operationalised (March 2014). Currently, the department is relying on the data captured through MIS as also observed in the sampled districts, related to certain modules[23], and periodical progress reports furnished by unit offices.

During the Exit Conference (November 2014), Government informed that although HMIS had reached the point of bidding it was snapped at final stage. It was further stated that Government is actively pursuing this issue.

2.12 Procurement and supply of drugs

Government entrusted (1998) the procurement and supply of drugs and equipment to hospitals as well as construction of hospitals to Andhra Pradesh Medical Services Infrastructure Development Corporation (APMSIDC). APMSIDC is headquartered at Hyderabad with Central Medicine Stores (CMS) in all district headquarters for distribution of drugs to various hospitals.

2.12.1 Allocation and expenditure

During the period 2009-2014, APMSIDC received ₹1,466.11 crore towards procurement of drugs and surgical items and ₹1,351.88 crore was utilised there against. Of this, medicines/drugs valuing ₹1,037.11 crore were issued to health units. Audit observations in this regard are given below.

2.12.1.1 Delayed receipt of drugs/surgical from the suppliers

As per agreement conditions, every firm has to supply the agreed quantity of drugs within 60 days. For delays up to ten days, a penalty of 0.5 *per cent* of the value of items not delivered within 60 days is to be levied. In case items are not delivered even after 70 days, the PO is deemed to have been cancelled.

There was delay in supply of drugs/equipment for period ranging from beyond 60 days to more than six months as shown below.

Table-2.9

Year	Total No. of supplies received	Supplies made in			Total delayed supplies	Percentage of delayed supplies
		> 60 and < 90 days	>90 and < 180 days	> 6 months		
2009-10	31911	6906	6450	1016	14372	45
2010-11	31605	6425	4845	803	12073	38
2011-12	42755	10869	8320	847	20036	47
2012-13	23104	4509	3386	414	8309	36
2013-14	29507	9005	5881	310	15196	51
Total	**158882**	**37714**	**28882**	**3390**	**69986**	**44**

Source: Records of APMSIDC

Except levy of liquidated damages for delayed supplies, there was no evidence of cancellation of RC agreements with the firms or blacklisting of the firms.

[23] Status of IMR/MMR, ANC registration, Institutional deliveries, formation of Village Health and Sanitation Committees, preparation of district action plans, project implementation plans, status of manpower in health care establishments etc.

Non-receipt/belated receipt of ordered medicines/drugs/surgicals resulted in APMSIDC purchasing these items at higher rates from the market/defaulting firms as no other firm was willing to supply at L1 rate.

During the Exit Conference (November 2014), Government confirmed that there were delays in receipt of drugs and stated that penalties are being levied for the delay in supply of drugs.

2.12.2 Stock Management

APMSIDC should maintain stocks required for supply to user institutions/hospitals. Audit observations in this regard are discussed in succeeding paragraphs.

2.12.2.1 Non-maintenance of drugs under Essential and Additional Medicines List

Central Medicine Stores should maintain three months stock of medicines in Essential Medicines List (EML) and Additional Medicines List (AML). During 2009-13, APMSIDC entered into Rate Contracts (RCs) with suppliers for certain items for procurement of drugs and surgicals, after following the due tendering process.

Audit scrutiny revealed that 165 items (September 2011) of drugs and 128 items (April 2013) in EML and AML that figured in those lists were not available in the test checked CMS. Date from which medicines were not available could not be verified in Audit due to non-availability of relevant data with APMSIDC. APMSIDC replied that buffer stock could not be maintained due to delay in finalisation of rate contract.

Further, it was noticed that several number of drugs and surgical items[24] which figured in lists of EML and AML that were required to be maintained at all levels of health care units were not included in the rate contract.

2.12.2.2 Non-conducting of physical verification of stock/Shortage of stock

As per provision of Article 143 of APFC Volume I, stores and stocks of Institute/office has to be got physically verified by a responsible subordinate officer every year and the results of verification got recorded in stock register(s).

Audit scrutiny revealed that CMS, Hyderabad did not maintain stock registers for the period from May 2008 to August 2010. Despite specific directions of APMSIDC for physical verification of stock balances with book balances every month, the procedure was not being followed. In four[25] out of seven test checked districts physical verification was not being conducted by Committee nominated for this purpose. Physical verification in August 2010 of stock by APMSIDC revealed shortage of stock worth ₹17.53 lakh. APMSIDC stated (May 2013) that an inquiry against concerned officials is in process.

2.12.3 Non-utilisation of MIS software

APMSIDC desired (January 2010) to build a new system called Medicines and Equipment Management Information System (MEMIS) to improve the efficiency in indenting control cycle and supply chain through utilisation of Information Technology (IT).

[24] 2009-10 – 11 items; 2012-13 – 147 items in respect of drugs and 2008-09 – 54 items in respect of surgicals
[25] Hyderabad, Kurnool, Mahabubnagar and Warangal

Development of this system was entrusted (April 2010) to a Company at ₹3.50 crore (paid ₹2.67 crore till March 2014) including five years maintenance period and it was completed in October 2010. However, this system was not operationalised as of August 2014 due to non-receipt of indents from user departments and non-conduct of analysis of all batches of medicines. Due to non-implementation of MEMIS, the expenditure of ₹2.67 crore remained unproductive and the objective of improving the efficiency of indenting control cycle and supply chain through utilisation of IT remained unachieved.

2.12.4 Quality Control

Audit scrutiny of the agreement conditions and procurement policy for quality control of medicines procured from various firms revealed the following.

Issue	Audit findings
As per Government Orders (October 2009), random samples should be taken from each batch tested for quality in a time bound manner i.e. within 10 or 21 days after receipt of sample and drug should be released for distribution after clearance of quality report and drugs which fail the test are to be returned to supplier at his cost.	• Out of 78,128 batches of drugs supplied by firms during 2008-2013, only 8,950 (11 *per cent*) were sent for analysis and of these only 7,100 (79 *per cent*) reports were received wherein 41 items were found to be of sub-standard quality (NSQ). However only 13 items were blacklisted by APMSIDC. • Not of Standard Quality (NSQ) drugs worth ₹1.30 crore were supplied to CMSs (for further distribution) and NSQ drugs worth ₹0.33 crore was returned to the firms.
As per conditions of tender document, in quality reports, if a drug supplied by firm is declared as 'not of standard quality', firm should be blacklisted for next three years.	In violation of norms, APMSIDC purchased drugs worth ₹6.51 crore during the period 2008-13 from firms that were blacklisted even though other firms were available.
Apart from APMSIDC, Drugs Inspectors (DIs) from Drug Control Administration also take samples from CMSs in districts for conducting quality analysis under Drugs and Cosmetics Act. Analysis reports are to be furnished to the concerned as early as possible to enable them to prevent consumption of NSQ drugs.	• Out of 1,392 batches taken (2008-09 to 2012-13) by DIs in test checked districts, analysis reports were received only in respect of 74 batches. Of these 33 reports were received after expiry of drug. Analysis reports for 1,318 batches were not received so far. Of these, drugs in 550 batches have already expired by May/June 2013. • About 22 batches of drugs were identified (2008-09 to 2012-13) as NSQ by DIs in CMSs of seven test checked districts. However, none of above drugs were blacklisted by APMSIDC. Thus, in spite of the drugs being identified as NSQ, these medicines were issued to patients. This indicates that there was no coordination between CMSs and quality control wing in APMSIDC.

The above instances indicate that quality control mechanism in APMSIDC was inadequate and ineffective.

During Exit Conference (November 2014), Government accepted that the quality control mechanism was not effective and stated that it is planning to increase the laboratories for testing of drugs.

2.12.5 Drug Control Administration

Drug Control Administration regulates manufacture, sale and distribution of drugs in the State. Its primary objective *inter alia* is to ensure that drugs made available to people are of required standards in terms of quality, purity and strength. Against a budget provision of ₹72.77 crore during 2009-14, an expenditure of ₹70.97 crore was incurred.

Audit findings are discussed in the succeeding paragraphs.

2.12.5.1 Drugs Testing Laboratories

Government established two Drugs Control Laboratories (DCLs) in Hyderabad (1981) and Vijayawada (1986). Audit scrutiny revealed outdated/non-functional equipment in these two DCLs. Although equipment required for analysis of drug samples were not working since May 2011 - September 2012, the department has not initiated any corrective action in this regard.

Government replied (January 2015) that equipment which needed repairs has been identified and action was on hand to get the same repaired and put to use. With regard to repairs to the equipment, Government contention that the repairs did not affect the testing activity is at variance with the documentary evidence regarding the analysis of drug samples, which reveals consistent shortfall every year.

Government further replied that fresh proposal has been submitted to GoI for its clearance for availing the assistance.

2.12.5.2 Shortfall in testing and analysis of drugs samples

Analysis of drugs samples plays an important role in determining compliance with prescribed quality standards, prevention of consumption of sub-standard, adulterated and spurious drugs. According to Functionary Manual of Department, a minimum of five samples of drug/cosmetic are to be analysed by a Junior Scientific Officer and a Junior Analyst has to analyse not less than 20 samples per month. As of March 2014, there was a shortfall of 45 *per cent* (7,343 analysed as against a total of 13,275 cases) in analysing of the samples received.

Government attributed (January 2015) the shortfall in analysis and testing of drugs samples to shortage of personnel for analysis of drug samples in Drugs Control Laboratory and stated that laboratory would be equipped with required men and equipment.

2.12.5.3 Non-issue/renewal of licences to Blood Banks

Drug Controller, Directorate General of Health Services, New Delhi issues licences to Blood Banks, only after verifying and carrying out a joint inspection along with DG, DCA.

Due to non-conducting of joint inspections with Central Drug Control Standard Organisation (CDCSO), Hyderabad and non-pursuance with Central Licensing Approving Authority, New Delhi, pendency was noticed in 62 cases for grant of licence (11) and renewals (51) to Blood Banks in the State as of March 2014. During the intervening period till grant of renewal of licence, Blood Banks continue to function without valid licence and without complying with the requisite norms endangering the lives of donors/recipients.

Government attributed (January 2015) the delays in grant/renewal of licences to stringent procedural regulations, joint inspections, compliance verification and dual licensing system requiring approval of Drug Controller General of India and stated that a proposal has been submitted to the Drugs Consultative Committee to dispense with the second joint inspection and simplify the procedure.

Non-creation of Centralised online database

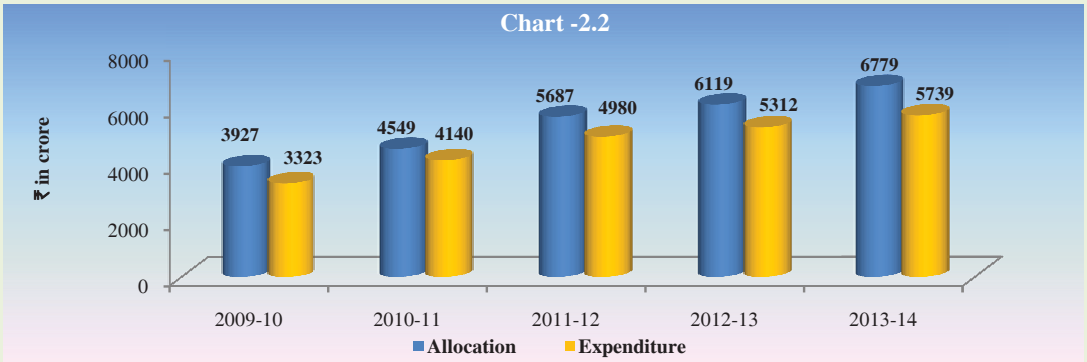
Although Audit pointed out in para 5.2 of Audit Report (Civil) for the year ended 31 March 2011 to have a centralised online database indicating the availability of various groups of blood at the blood bank level, district level and at the State level to enable maximum utilisation of precious blood, the same has not yet been created (March 2014).

2.13 Financial Management

One of the four priority outputs envisioned under health sector reforms in Andhra Pradesh was 'Strengthening of Financial Management Systems'. Audit findings in this regard are discussed below.

2.13.1 Budget and Expenditure

Details relating to year-wise allocation and expenditure on health sector in the State are as follows.



Source: Appropriation Accounts of respective years

As seen above, despite targeting improved spending on health, Government could not exhaust the funds allocated for health in any of the last five years. Savings in this regard ranged from ₹409 crore (2010-11) to ₹1,040 crore (2013-14). Unnecessary supplementary grants (₹117.17 crore) were also obtained (2013-14) in respect of four schemes[26].

[26] Grants-in-aid to Aarogyasri Trust (two instances), Rajiv Bala Sanjeevani and Development of NIMS University

Apart from budgetary allocation, funds are provided by GoI to State for various interventions under NRHM. Details of funds provided and expended under NRHM during 2009-14 are given below.

Table-2.10

(₹ in crore)

Year	OB	Allocation	Release by GoI	Expenditure out of GoI funds	State share to be released	State share actually released	Short release of State share	Expenditure of State share	Total releases	Total expenditure	CB
2009-10	107	717	708	765	125	2	123	2	817	767	50
2010-11	50	816	810	694	143	0	143	0	861	694	167
2011-12	167	932	934	709	164	184	-19	184	1284	893	392
2012-13	392	1088	838	951	363	507	-144	507	1736	1457	279
2013-14	279	1068	814	855	NA	NA	NA	NA	NA	NA	NA
Total		**4621**	**4104**	**3974**	**795**	**693**	**103**	**693**	**4698**	**3811**	

Source: Ministry of Health and Family Welfare, Government of India NA: Not Available

Audit scrutiny further revealed the following:

(i) Out of total allocation of ₹4,621 crore, GoI released an amount of ₹4,104 crore, short release being ₹517 crore (11 *per cent*). State Government has not released about ₹103 crore (up to 2012-13) of its share. Reasons for short releases were not forthcoming from records.

(ii) Out of the funds released by GoI, ₹130 crore remained unutilised for the intended objective. Government attributed it to last minute receipt of funds from GoI and to non-receipt of utilisation certificates from District Health Societies (DHS) and other institutions in respect of advances given. During 2012-13, GoI released most of its share during the last week/months of year. Out of ₹529.94 crore released to State Health Societies (SHS), ₹401.79 crore was released during February/March and ₹77.11 crore was released during the last week of March.

(iii) During 2011-12, the department had not utilised budget provided (₹4.02 crore) under 'Care of Sick Child and Severe Malnutrition', 'Other Strategies/Action' and 'Infant Death Audit'. Utilisation of funds in respect of 'Facility Based Newborn Care' (FBNC) was also negligible (₹0.88 crore out of ₹12.03 crore provided).

Similarly, during 2012-13, ₹2.61 crore provided for management of diarrhoea, micro nutrient malnutrition, ₹3.39 crore for other strategies, ₹1.08 crore for infant death audit were not utilised.

(iv) During 2009-12, there was no expenditure on Infant Young Child Feeding. In 2012-13, out of ₹2.61 crore provided, only ₹0.38 crore was released to field units for implementation (shortfall: 85 *per cent*).

(v) During 2009-10 to 2012-13, no activity was taken up with regard to prevention of diarrhoea, which causes ill health in children. Although ₹2.61 crore was provided during 2012-13, no expenditure was incurred.

(vi) Under 'Other Strategies', during 2012-13, visits to Child Health clinics were to have been undertaken by paediatricians in 1,624 PHCs (total cost: ₹3.39 crore). However, although ₹1.54 crore was released to districts for conducting Child Health clinics, only ₹3.62 lakh was expended in this regard.

(vii) Audit observed that, despite the implementation of health sector reforms, envisaged improvement in accounting and auditing systems did not materialise as evidenced by arrears in compilation of accounts[27].

Government attributed (December 2014) the delays in implementation of the identified programmes to time taken to receive programme guidelines, establishment of SNCUs with due administrative approvals, HR issues and other disturbances.

2.13.1.1 Aid received under DFID

An amount of ₹299.04 crore was received as aid from DFID during the period 2007-10 for implementation of Health Sector Reform programme. Government released this amount to CH&FW during 2007-11. Audit observations in this regard are as follows:

(i) Rupees 55 crore released to Strategic Planning Innovation Unit (SPIU) remained unutilised up to November 2012 and was later remitted[28] into Government account.

Government attributed non-utilisation of these funds to the specific project not taking off as planned.

(ii) Diversions from the released amounts were also observed to the extent of ₹0.25 crore (May 2010) for day to day expenditure of SPIU and for Bio-Convention (February 2013) ₹0.71 crore.

2.14 Conclusion

As brought out in the foregoing paragraphs, the primary objective of health reforms of improving accessibility to health care facilities in rural and tribal areas largely remained unfulfilled. Norms prescribed for infrastructure, manpower and equipment were not complied with. Positioning of ASHAs and providing adequate drug kits to them was not given adequate attention. There were shortages in both medical and paramedical staff, especially personnel skilled in specialised branches of medicine at primary, secondary and tertiary health care centres. The objective of Fixed Day Health Services programme of providing medical facilities to habitations beyond three kilometres from SCs/PHC was partially fulfilled. Release of funds under emergency response is based on actual expenses as per SoEs and there was considerable variation in number of vehicles operated as per CFW and database. Replacement/refurbishment of vehicles was delayed. Implementation of Aarogyasri suffered from several deficiencies. Several inconsistencies were noticed in database like non-matching of ration cards with Civil Supplies data, claims exceeding pre-authorised amounts, etc., indicative of lack of proper internal controls and validation controls for effective implementation of online IT application. Further, due to non-operationalisation of

[27] Compilation of Accounts of APMSIDC from the year 2007-08 onwards was yet to be completed
[28] ₹54 crore vide Challan dated 3 December 2012 and ₹1crore vide Challan dated 14 March 2013

Health Management Information System (HMIS), the envisaged objective of effective control/monitoring of financial as well as physical activities remained unfulfilled. Procurement was marked by delay in supply of drugs/surgicals from suppliers. Monitoring of drug control including licensing functions was ineffective. Thus, the key reform measures initiated by State Government with regard to health sector have not translated into desired levels of action, resulting in the envisaged outputs not being achieved.

2.15 Recommendations

Audit recommends for consideration that:

(i) Government create adequate number of health care institutions and provide required manpower, infrastructure and equipment in all the medical institutions.

(ii) Proper mechanism be put in place to evaluate Emergency Transport Services and for periodical/surprise inspection of empanelled hospitals to ensure availability of envisaged services/treatments under Aarogyasri health insurance.

(iii) Government ensure timely procurement/supply of drugs through APMSIDC. Quality control mechanism in APMSIDC should be strengthened.