3.1 Thematic Audit of Water Management in Delhi

Executive Summary

A thematic audit of the Delhi Jal Board was conducted with a view to ascertaining the deficiencies in supply of potable water to the population of Delhi. The raw water available in Delhi at present is not sufficient to provide potable water to the whole population of Delhi as per prescribed norms. Two dams were proposed on river Yamuna in 1994 to augment raw water in Delhi, but were not constructed even after a lapse of 18 years after incurring an expenditure of ₹ 214 crore. The production of potable water at WTPs and waste water recycling plants was also found to be below designed capacity. The 8-MGD recycling plant at Chandrawal was commissioned after a delay of more than four years. Due to the absence of proper measurement system, whether the wastage of water during treatment process was within permissible limits at Chandrawal could not be ascertained.

The allocation of jurisdictional areas among divisions was based on Assembly Constituencies and not command areas of different treatment plants, due to which, proper measurement of water supplied to each division was not possible and accountability for loss of water could not be fixed. The drinking water was not being distributed equitably amongst the population due to lack of reliable data on population and water supplied to different areas. Further, 24.8 *per cent* of the households in Delhi were being supplied water through tankers in the absence of pipe lines.The average per capita supply was 3.82 litres per day against a prescribed norm of 172 litres. Metering of water at consumer end was not comprehensive due to which, less than 40 *per cent* of water produced was billed during last three years.

3.1.1 Introduction

The Delhi Jal Board (DJB), constituted under the Delhi Water Board Act, 1998, is responsible for the supply and distribution of potable water in the area under the jurisdiction of the Municipal Corporation of Delhi. The DJB also supplies water in bulk to New Delhi Municipal Council and Delhi Cantonment Board. The sources of water for producing potable water are YamunaRiver, Ganga water from Uttar Pradesh, water from Bhakra through Haryana, Ranney wells and tube wells.

The DJB has nine water treatment plants (WTPs). Six plants are functional with a combined capacity of production of 690 million gallons daily (MGD) of potable water. Apart from this, there are four process waste water recycling plants (total capacity 45 MGD) which produces potable water from waste water of WTP.

3.1.1.1 Organizational set up

The DJB functions under the Chairmanship of the Chief Minister of Delhi and is assisted by a Vice Chairperson, nominated by the Speaker of the Legislature and 16 other members consisting of 10 political/ex-officio members and six administrative/executive members. Member (Water) heads the Engineering Wing for water activities which is under the overall control of Chief Executive Officer (CEO), who is assisted by Chief Engineers, Superintending Engineers and Executive Engineers.

3.1.2 Audit scope and methodology

The thematic audit was conducted from June to November 2012, covering the period from April 2009 to September 2012. Records at DJB Headquarters, WTPs, Booster Pumping Stations, Process Waste Water Recycling Plants, Civil and Electrical and Mechanical (E&M)Divisions, Treatment and Quality Control Wing at Wazirabad and Revenue Wing at the DJB headquarters were examined in audit.An entry conference was held in July 2012 with the DJB to discuss the objectives and scope of audit.

All the 22 civil divisions and nine E&M divisions of the DJB were covered for collection of data. Two out of the six operational WTPs (Chandrawal and Wazirabad) and three ProcessWaste Water Recycling Plants were test checked (Chandrawal, Haiderpur and Wazirabad). A detailed study of the water trails emanating from two WTPs, viz. Chandrawal and Nangloi, their related reservoirs, command areas and distribution lines was conducted.

With a view to assessing public perception about water shortage situation,a questionnaire was sent to randomly selected 584 RWAs out of 1947 registered under the Bhagidari scheme of the Government of NCT of Delhi (GNCTD). Responses were received from 111 RWAs.

An exit conference was held on 06 March 2013 to discuss the audit findings and draw the views of the DJB on the same.

3.1.2.1 Audit objective

The objective of thematic audit was to ascertain whether:

- the raw water available in Delhi was sufficient to provide adequate drinking water to whole of the population in Delhi,
- available raw water was being processed in WTPs in an efficient manner with minimum wastage,
- quality of drinking water produced and supplied conformed to the prescribed standards,
- the system for distribution of water was designed for efficient utilisation of available water and to ensure supply of water to whole of the population as per prescribed norms,
- the system of billing and collection was efficient, and
- complaint redressal system was effective.

Audit findings

Augmentation of raw water availability

As per provisional figures of Census 2011, the population of Delhi in 2011 was 167.53 lakh, growing at the rate of 1.92*per cent* per annum. Accordingly, the projected population of Delhi in 2012 is 170.75 lakh and it would be 202.64 lakh in 2021. Considering per capita requirement of 60 gallons per day, current requirement of potable water in Delhi works out to 1025 MGD and for 2021,it would be 1216 MGD. Against this, the current production is only about 818 MGD due to shortage of raw water, leaving a gap of 207 MGD.

In terms of a Memorandum of Understanding (MoU) signed in May 1994 by five basin States, namely Delhi, Haryana, Uttar Pradesh, Rajasthan and Himachal Pradesh, the tentative allocation of Yamuna surface water to Delhi was 0.724 Billion Cubic Metres (BCM) per year. The seasonal allocation of this water is given in **Table 3.1.**

Table 3.1: Allocation of Yamuna water to Delhi

Sl. No.	Period	Allocation (in BCM)
1	July to October (monsoon season)	0.580
2	November to February	0.068
3	March to June	0.076
Total		**0.724**

As can be seen from the above, 80 *per cent* of the allocation is during monsoon season,when most of the water flows through Delhi untapped. The allocation during the remaining two seasons works out to approximately

20 *per cent*. In order to utilise flow of the river during monsoon, MoU was signed (November 1994) by the basin States to build two dams up the river at Renuka (275 MGD) in Himachal Pradesh and Kishau (372 MGD) in Uttar Pradesh (now in Uttarakhand).The GNCTD had released (October 2008) an amount of ₹ 214 crore to the Government of Himachal Pradesh for construction of Renuka dam for exclusive use of Delhi. However, work on these dams had not started even after a lapse of more than 18 years due to disagreement between the beneficiary States regarding sharing of waters and hydro power. Construction of Renuka dam is pending for forest clearance from the Ministry of Environment and Forest, GoI as the clearance earlier accorded was challenged in the Green Tribunal. Kishau dam in Uttarakhand was yet to be taken up.

The raw water for Haiderpur plant is released by the Government of Haryana at Munak (in Haryana) into Delhi branch channel and it flows to Haiderpur plant. In order to reduce loss of water during transit, Haryana proposed (February 1990) construction of an exclusive parallel Water Carrier System (WCS). The WCS was to be utilised for carrying raw water to Wazirabad Water Treatment Plant also. Accordingly, an MoU was signed (February 1993) between Haryana and Delhi for construction of this WCS at an estimated cost of ₹ 314 crore. Haryana was to maintain and operate this WCS for which annual charges were to be paid by Delhi. Once operational, a saving of 80 MGD of water was expected which would have been sufficient to run three WTPs, one each at Dwarka, Bawana and Okhla. The construction was almost complete in June 2012 and by that time Delhi government had released ₹414 crore. Later, a dispute arose between Delhi and Haryana regarding ownership of the expected savings of 80 MGD of raw water. Delhi Government approached (June 2012) Central Government for resolution of the matter. However, the expenditure of ₹ 414 crore on construction of the WCS, remained unfruitful as Delhi did not receive the additional quantity of raw water of 80 MGD.

It was observed that any significant step towards augmentation of the availability of raw water would take about 6-7 years to realize and by that time the population of Delhi would have increased and so would the demand for water.

3.1.3 Production of potable water

3.1.3.1 Water treatment plants

The DJB has six operational WTPs with acombined capacity of 690 MGD of

potable water. Details are given in **Table 3.2.**

Table 3.2: Operational WTPs

Sl.No.	Name of plant	Capacity (MGD)
1.	Chandrawal I&II	90
2.	Wazirabad I,II,III	120
3.	Haiderpur I&II	200
4.	Nangloi	40
5.	Bhagirathi	100
6.	Sonia Vihar	140
Total		**690**

Audit examined records of two WTPs (Chandrawal and Wazirabad) in detail and audit findings are discussed in succeeding paragraphs.

(a) Absence of measurement of wastage at Chandrawal WTP

Raw water for Chandrawal WTP is drawn from Yamuna at Wazirabad. Prior to construction of a twin pipeline from Wazirabad to Chandrawal in April 2012, raw water was supplied through open channels and there was no reliable data on receipt of raw water at Chandrawal. Thereafter, actual reading of raw water intake could commence only in July 2012, as one of the flow meters was out of order.

Similarly, measurement of potable water produced at Chandrawal was also not found reliable. Two methods of calculations were found recorded in the log sheets maintained at ChandrawalWTP-I, the first one was based on flow meter recordings and the other one on the rated capacity of the pumps used. It was seen during test check that the reading recorded for 24 hours on 26 July 2012 and 28 July 2012, by the flow meter was 36 MGD (on both days), while as per traditional method, water pumped out was 32 and 34.22 MGD respectively. Flow meters are considered to provide accurate and actual measurement of water that flowed through the pipeline, whereas reading based on rate of pumping tends to be higher than actual as pumps do not function technically at their 100 *per cent* efficiency. However, in this case, flow meter reading was more than that calculated on the basis of rate of pumping. On enquiry, the EE (E&M-I), stated (November 2012) that repeated complaints were placed with E&M (HP II) about the unrealistic and erratic readings shown by flow meters at both the works.

In case of Chandrawal-II, log sheets for potable water pumped out from the plant was maintained on the basis of capacity of pumps used and the duration of pumping. Since the pumps were very old and were functioning with decreased efficiency, the quantity of water worked out in the log sheets was not accurate.

In the absence of accurate information regarding raw water intake and potable water produced, audit could not derive assurance that the Chandrawal WTP was working efficiently and the wastage of water during purification process was within the permissible limits of eight to ten *per cent*.

The DJB stated (March 2013) that the flow meters are working properly now and the wastage during production is about eight per cent. However, Audit could not verify that the wastage was within permissible limits as there was no system for measuring wastage during treatment at the time of audit.

(b) Wastage of potable water due to defective valves and sluice gates

During visit to Chandrawal WTP-II on 18 to 21 June 2012 (three days), it was seen that the valves installed in the pipelines carrying potable water into the UGR from the filters were leaking continuously.

It was stated (July 2012) by the Executive Engineer that the valves and sluice gates on the filter beds of the plant were leaking as they were more than 57 years old and remained unrepaired/un-replaced due to budget constraints. Test check of log sheets revealed that the operational staff had recorded the necessity of immediate stoppage of major leakages in the sluice valves which also hampered proper cleaning of filters as the required pressure of potable water was not available. Inaction on the part of DJB in plugging the leakages indicates insensitivity towards wastage of precious potable water.

The DJB replied (March 2013) that replacing the sluice valves and gates without a holistic approach towards maintenance and rehabilitation plan is not advisable as it can result in disruption of services and therefore, the existing system is being maintained by incurring bare minimum expenditure. A complete rehabilitation of Chandrawal WTP and its command area is expected to be taken up by 2015. However, allowing leakage of precious potable water to continue, expecting it to be plugged during rehabilitation to be taken up in 2015 does not appear prudent.

(c) Non-removal of silt from River Yamuna at Wazirabad pond

The pond on Yamuna River bed is the source of raw water for Wazirabad and Chandrawal WTPs. Bhagirathi and Sonia Vihar WTPs also draw raw water from Wazirabad during closure for annual cleaning of Murad Nagar conduits which bring Ganga water from Uttar Pradesh to these plants. Records revealed that the deposit of silt reduces the capacity of pond as depth of water is reduced by three to four feet. Dredging of the pond was last carried out in July 2006. Although a proposal was mooted for de-silting by Executive Engineer (E&M-II) in September 2011, only administrative approval for the same was given by the Board and tender was yet to be called for as of January 2013. Delay in dredging resulted in reduction in capacity of the pond thereby depriving the DJB of any water reserve to meet emergency situations.

In its reply (March 2013), the DJB stated that since dredging is more prevalent in coastal areas, not much expertise exists in Delhi due to which it

took time to develop clarity on methodology and conditions to define scope of work. The reply is not convincing as dredging was carried out earlier also in the year 2006.

(d) Underutilisation of capacity of pumps

As per Energy Audit Report (December 2006) for WTP-I, Chandrawal, the operating capacity of two out of 10 pumps used for pumping potable water, were 57 *per cent* and 63.7 *per cent* respectively, which were below the designed efficiency of 85 *per cent*. The reasons for lower output were- (i) smaller size of delivery pipe due to which velocity of water in these pumps were more than acceptable limits and (ii) operation of the pumps at a higher head than the rated figure. The Energy Auditors recommended modification of delivery pipelines, but no action was taken by the DJB as of October 2012 resulting in underutilisation of the pumps.

The DJB replied (March 2013) that once the rehabilitation of Chandrawal WTP is complete, the issue will be resolved. The reply is not convincing as even after six years, no action was taken on the report that was prepared in 2006.

3.1.3.2 Process waste water recycling plants

During the process of producing potable water, WTPs produce waste water in the form of sludge from clarifiers and backwash from filters (water used to wash the filters). The average permissible wastage of water is eight to ten *per cent*. In order to augment the production of potable water, the DJB constructed four Process Waste Water Recycling Plants (PWWRP)as detailed in **Table 3.3.**

Table 3.3: Details of recycling plants

Sl. No.	Location	Capacity (MGD)
1	Chandrawal	8
2	Wazirabad	11
3	Haiderpur	16
4	Bhagirathi	10
Total		**45**

(a) Delay in commissioning of recycling plant at Chandrawal

DJB entered into an agreement (February 2007) with M/S Gannon Dunkerley& Co. Ltd. for construction of PWWRP with a capacity to produce eight MGD of raw water on turnkey basis at a cost of Rs 12.86 crore, with

stipulated date of commissioning as 30 June 2008 including three months trial run. The raw water produced by this plant was to be fed to the inlet of the main WTP.

The recycling plant was stated to be functional from 28 September 2012 and has been producing raw water since then. However, scrutiny of records revealed that the plant was producing only 4.70 MGD of raw water on an average during the period from September to October 2012 against its designed capacity of eight MGD. The plant was yet to be commissioned as of November 2012.

Thus, delay in commissioning of the recycling plant deprived the people of more than seven MGD of precious potable water for more than four years, considering wastage of eight *per cent* during treatment.

The DJB replied (March 2013) that the delay in commissioning was due to various reasons like extreme site constraints and high ground water table which impeded construction of deep chambers, demolition and reconstruction of chambers necessitated by insufficient space, hindrance in deep excavation due to other underground pipes etc. It was also stated that the plant is now fully commissioned. However, the fact remains that the plant was commissioned after a delay of more than four years. The site constraints and other difficulties could have been foreseen.

(b) Low production of water due to damaged waste water pipelines

The recycling plant at Wazirabad was required to produce 11 MGD of potable water after collecting waste water from the three 40 MGD plants. The plant was commissioned in December 2009. The pipeline carrying waste water from one of the plants was damaged in January 2010 and thereafter, waste water from only the remaining two WTPs was being utilised for production of raw water. Due to this, the average production of water by the recycling plant during January-June 2012 was reduced to 7.34 MGD against full capacity of 11 MGD. Though two years have passed, damaged pipe has not been repaired which resulted in short production of potable water to the extent of 3.66 MGD.

The DJB, in its reply (March 2013), stated that the pipe line bringing waste water from one of the plants crossed another pipeline for supply of water from Haiderpur to Wazirabad and vice-versa in emergency. Therefore, waste water pipeline required re-routing under the other pipeline and the work is likely to be completed within next two months. However, the reply did not explain why repairs/re-routing of a pipeline damaged in January 2010 was taking such a long time.

(c) Short production at recycling plant, Haiderpur

Two WTPs at Haiderpur of 100 MGD capacity each collectively produce about 16 MGD of waste water, for which a recycling plant of 16 MGD

capacity has been constructed by M/s Larson and Toubro Ltd., who was also entrusted with the operation and maintenance of the plant. The plant is in two parts. The first part converts the waste water into raw water and the second produces potable water from this raw water. As per the contract, 97 *per cent* of the waste water was to be converted into potable water.

Audit scrutiny of data of water produced during 12 months for the period from April 2010 to August 2011 (April to May 2010, August to October 2010, December 2010 to February 2011 and May 2011 to August 2011) revealed that during this period, the plant produced 4788 MG of potable water from 5464 MG of waste water. The wastage at the recycling plant was 12.37 *per cent* which was more than four times the permissible wastage of three *per cent*. The short production of potable water due to excessive wastage worked out to 1.4 MGD.

The DJB stated (March 2013) that the recycling plant is required to be operated at the peak efficiency for nine months in a year since during monsoon season, the efficiency will reduce due to increase in turbidity in the raw water which affect recovery of water at the recycling plant. The reply is not correct since the plant was not giving the desired output in any of the months for which data was provided to Audit.

3.1.3.3 Qualityof potable water

The DJB has water testing laboratories at all WTPs, beside six Zonal laboratories to ensure quality of potable water as per BIS norms. The laboratories conduct chemical and bacteriological analysis of water from WTPs, reservoirs, samples from private bodies/individuals, tube wells, Deep Bore Hand Pumps, Ranneywells and other sources.As part of thematic audit, records of Quality Control Laboratory, Wazirabad was examined. Audit findings are discussed in the succeeding paragraphs.

(a) Shortage of manpower

As per information made available to audit, against sanctioned strength of 180 for quality control, only 118 regular staffs beside 16 technicians on contract basis, were available leaving a shortage of 46 staff.

(b) No corrective measures on deficiencies reported in test reports

In addition to its own laboratories, DJB has also engaged the services of National Environmental Engineering Research Institute (NEERI), a government agency, to conduct third party quality checks of potable water. Corrective measures are to be taken by Zonal Engineers on deficiencies pointed out in reports of field laboratories and NEERI. Audit observed delays in taking remedial action by Zonal Engineers on reports forwarded by the Field and Zonal Laboratories and NEERI indicating absence of an effective internal control mechanism within the DJB.Out of 19 cases pertaining to the period from July 2011 to September 2011 test checked, in five cases, no

remedial action was found to have been taken by the Zonal offices on rechecking. As a result, substandard potable water was used by the public.

The DJB replied (March 2013) that since the city has intermittent water supply system, period of physical checking and collection of water samples gets restricted. Due to these reasons, corrective measures to restore water supply becomes time consuming. Steps are being taken to improve upon it.

3.1.4 Distribution of potable water

With a per capita requirement of 60 gallons (274 litres) of water per day including domestic, institutional, industrial and fire service requirement, the total requirement of potable water for Delhi works out to 1025 MGD, against which the DJB produces and distributes about 818 MGD of potable water, the shortage being 20.02 *per cent.* Nevertheless, the management of distribution of water by DJB was found to be deficient on various counts as discussed in the succeeding paragraphs.

3.1.4.1 Irrational assignment of jurisdictional areas to Divisions for supplying potable water

In Delhi, six WTPs cater to the water need of the population of individual command areas. Potable water is initially pumped through transmission lines into Underground Reservoirs (UGRs) located in command areas, from where it is further pumped into smaller UGRs and then distributed to households through distribution lines with the help of booster pumps. Pumping of water into various UGRs and distribution lines is managed by nine E&M divisions of the DJB whereas distribution lines are maintained by 22 civil divisions. Audit observed that the allocation of jurisdictional areas amongst various divisions, E&M as well as Civil, was done on the basis of Assembly Constituencies. Consequently, each division has to cater to two or more constituencies. In this set up, some E&M divisions receive water from two or more WTPs and most of them supply water to more than one civil division making it difficult to track the flow of water from WTPs to the users. Similarly, individual civil division get water supply from more than one E&M division. In some cases, water from one UGR is supplied to areas under more than one civil division. Some time, a single distribution line covers parts of two civil divisions also. In this scenario, water supplied to each division is not measurable, making proper management and distribution of available potable water ineffective and inefficient respectively. Due to the complicated system of distribution, water is not supplied to divisions according to the population of the area under their jurisdiction. As such, the present allocation of distribution work amongst various divisions is not conducive to efficient water management and equitable distribution of potable water to the population of Delhi. A proper distribution of jurisdictional areas will also aid in making individual civil division accountable for water received, distributed, distribution loss, non-revenue water, etc.

In reply, the DJB stated (March 2013) that the management deficiencies were largely because the city had been growing partly in an unplanned manner. It was further stated that the concept of district metering area was being implemented through which it would become possible to account for the water supplied and consumed in the command of specific water facility. It would also help in distributing water more evenly and reduce non-revenue water.

Planning process of DJB should have taken into account the population growth patterns and expansion of the city. Further, as regards implementation of the concept of district metering area, the DJB has not given any time frame for the same.

3.1.4.2 Population not receiving piped water

As per information available from census 2011, 24.8 *per cent* of the households in Delhi were not receiving piped treated water. As per information furnished by 15 out of 22 civil divisions, a population of 32.53 lakh not covered through pipelines, was supplied with 1000.94 MG of water through tankers during the year 2011-12 with average per capita supply of 3.82 litres per day against a prescribed norm of 172 litres per capita per day for domestic use. The details are in **Annexure-3.1**.

The DJB stated (March 2013) that tanker supply is an emergency supply to meet drinking water needs only and for non-potable purposes, water demand is met through ground water resources in the areas. However, the fact remains that DJB failed to supply adequate piped treated water to 24.8 *per cent* of households in Delhi.

3.1.4.3 Short supply/non-availability of water in areas at tail end of distribution lines

Audit observed that DJB was also supplying water through tankers to areas connected by distribution lines. The reason for this was shortage of water in those areas due to installation of online booster pumps by consumers. As per information furnished by 11 civil divisions, more than seven lakh people were affected due to shortage of water in areas covered through distribution lines. On this issue, DJB stated that although installation of on line booster pumps by consumers is not permitted, action is taken only when a specific complaint is received. DJB's approach towards removal of illegal online boosters was not proactive, even though this was affecting proper distribution of potable water.

In reply (March 2013), the DJB stated that three magistrates had been appointed for taking action against those who indulge in installation of online boosters and illegal tappings but this drive needed to be pursued more to address the problem of shortage of water in tail end areas. However, the reply is silent about concrete action plan and time frame for addressing this issue.

3.1.4.4 Non-accountability of water supplied

The distribution of potable water is the responsibility of civil divisions which maintain distribution lines and attend to consumer grievances, complaints relating to short supply, unauthorized connections, installation of meters etc. However, there is no system in DJB to measure the quantity of water received by each division and actually distributed to consumers. Due to this, DJB is not in a position to determine accountability with regard to wastages, leakages, non-revenue water etc.

Although a project for installation of 305 flow meters was launched in July 2007 with scheduled date of completion as 18 July 2009, only 284 meters were installed till May 2012. Further, information from these flow meters is not of much use as it does not give quantity of water supplied to individual divisions.

The DJB stated (March 2013) that once the entire network is divided into district metering areas, it would be possible to account for the water supplied and consumed. However, the DJB has not given any specific details of schedule of implementation.

3.1.4.5 Water trail from Nangloi WTP

The water trail from Nangloi WTP was analysed in detail in audit to illustrate the deficiencies in distribution system. The Nangloi WTP produces approximately 40 MGD of water and supplies to areas under four civil divisions through two E&M Divisions. Water from the WTP is also being supplied to IGI Airport and to DDA.

There are two transmission lines emanating from the WTP, one towards Pappankalan and the other towards Najafgarh. The Pappankalan line supplies water mostly to areas under West III division through three primary UGRs at Hastal village, Bodella and Panchwati. Apart from these, there is one more UGR, Command Tank-2 (CT-2) being maintained by the DDA served by this line. Seven distribution lines also branch out from the transmission lines which supply water directly to Vikas Nagar, Mundka, Nagloi, Dabri, Fish Market, Vishwas Park and MatialaVillage. Further, there are 12 smaller UGRs under Bodella main UGR which supplies water to Vikaspuri area. A map of distribution lines emanating from the WTP is placed at **Annexure-3.2.**

Pumping of water from various UGRs is handled by two E&M divisions viz. West and South West divisions. Apart from water from Nangloi, West Division also handles water from Haiderpur and Wazirabad WTPs. Similarly, South West Division also handles water from Haiderpur and Sonia Vihar. Further, areas under three out of four civil divisions which receive water from Nangloi,also receive water from Haiderpur WTP. This is due to the fact that the jurisdictional areas of civil divisions have been allocated on the basis of Assembly constituencies. One distribution line from Bodella UGR branches

into two and both the branches supply water to areas under both West-I and West III divisions. Similarly, water from CT-2 (DDA UGR) is supplied to areas under West-I, West-III and South West I divisions through a single distribution line which snakes through all these divisions. In this set up, water received by each civil division can not be measured.

As per information furnished by the four civil divisions receiving water from Nangloi WTP, the total population in the command area of WTP Nangloi was 23.47 lakh. Since average production of water at the WTP was 40 MGD, per capita availability of potable water per day works out to 77.36 litres. However, per capita supply of water to different areas under the WTP ranged from 3.36 litres per day to a population of 2.5 lakh under the Daulatpur UGR to 224.61 litres to a population of 1.9 lakh in Nangloi area being fed directly from the transmission line. Areas under Daulatpur and Ujwa UGRs were getting water from WTP only once in two days. Details of area wise population, water supply and per capita supply in the command area of the WTP are given in **Annexure-3.3**. Per capita supply position of potable water to different areas is given in **Table 3.4.**

Table 3.4: Per capita supply position of potable water

Sl. No.	Per capita supply per day	Population
1	Below 20 litres	5.73 lakh
2	20 to 50 litres	8.79 lakh
3	50 to 75 litres	3.32 lakh
4	75 to 100 litres	1.34 lakh
5	100 to 150 litres	0.40 lakh
6	Above 150 litres	3.90 lakh

As can be seen, the distribution of water to the population was far from equitable. It was also observed that the areas which were receiving excess water, i.e. Nangloi and Mundka, were being supplied water directly from the transmission lines near the WTP. This indicates that there is no regulation of water supply in areas where the water is supplied directly from the transmission lines.

Although all the four divisions furnished population served by each UGR/distribution line, these figures were stated to be based on the voters list of the area. Therefore, the population figures are only an approximation and not actual. In the absence of reliable data, the DJB was not in a position to ensure distribution of water according to actual requirement in different areas.

The DJB, in its reply (March 2013), stated that large number of unauthorized growth in unplanned colonies came up in West and South West Delhi due which the water supply in its command area became un-rationalised. Some of the areas presently being fed from Nangloi WTP were to be transferred to command of other WTPs. It was also stated that the DJB had taken up a project under PPP module so that 24 hours water supply at adequate pressure is available in all the households.

The reply gives reasons for deficiencies in distribution and DJB's plans for resolving them. However, no specific time frame has been given as to when the problems of shortage of water and inequitable distribution would be resolved.

3.1.4.6 Deficiencies in water trail from Chandrawal WTP through distribution lines to end users.

There are six civil divisions that receive water from Chandrawal WTP (Central-I, Central-II, North-I, North West-IV, South West-III and West II). They also receive water from Wazirabad WTP and Haiderpur WTP and have 65 UGRs under their control. There are 10 main UGRs receiving water from Chandrawal WTP and supplying to distribution lines. Examination of water trail from Chandrawal WTP revealed the following deficiencies:

(a) Non utilisation of UGR at Palam

Apart from the operational UGR at Palam, there is one more reservoir of 2.4 MG to supply water when the operational UGR is shut down for cleaning etc. This additional reservoir was repaired in 2004-05 at an approximate cost of ₹ 80.00 lakh but was not handed over to E&M Division by Civil wing (October 2012) after repairs, resulting in non-utilisation of this reservoir.

In its reply (March 2013), the DJB stated that the reservoir would be used shortly for NDMC supplies. However, the fact remains that a reservoir repaired at a cost of ₹ 80 lakh remained unused for eight years.

(b) Absence of actual data on population and quantity of water supplied to different areas

In North West-IV, West-II & South West-III divisions, the data on population of their command areas is not maintained while in Central-I, II & North-I divisions, the respective Executive Engineers stated that the methodology of determining the population of the command areas was based on the voters list of area.

Further, in most of the cases, quantity of water supplied from each UGR was calculated on the basis of capacity of booster pumps and the duration of pumping. Even where flow meters were installed, data from such flow meters were not being used by Divisions.

The DJB replied (March 2013) that the issue would be resolved once the proposed rehabilitation of Chandrawal WTP is done. Thus, there is no definite time bound action plan.

Revenue earnings

3.1.5.1 Metering of water supply

In order to keep a watch on consumption patterns and realisation of revenue, proper measurement of supply of water for domestic, commercial and industrial purposes is essential.

As per information furnished by DJB (August 2012), there were 19.64 lakh connections out of which 6.79 lakh were un-metered/without functional meters which constituted about 35 *per cent* of the total connections. Apart from ensuring proper realisation of revenue, metering will also increase efficiency in use of water, detection of leakages in the system and enable high end consumers to be charged for extra consumption. Supply of water to such a large number of consumers without meters/with defective meters is detrimental to optimum utilisation of the available potable water apart from depriving DJB of revenue.

In its reply (March 2013), the DJB stated that it had sanctioned a proposal for procuring and installing eight lakh domestic water meters meeting international standards and tenders for procurement of four lakh water meters had already been received. However, the reply is silent as to when the DJB would be able to achieve metering of remaining water connections.

3.1.5.2 Non-revenue water

Non-revenue water is water which does not earn any revenue. This could be due to different reasons like unauthorised consumption through illegal connections, water theft, metering inaccuracies, authorised consumption not billed such as public taps and also real losses through leakages in the transmission and distribution networks. Reduction in non-revenue water will not only improve financial sustainability of the DJB but also reduce loss of water which can be used to meet currently unsatisfied demand or future demand of potable water.

In terms of Ministry of Urban Development, GoI Handbook on Service Level Benchmarking, the acceptable extent of non-revenue water is considered as 20 *per cent.* However, the extent of non-revenue water in DJB was more than three times the prescribed limit during last three years as shown in **Table 3.5.**

Table 3.5: Extent of non-revenue water

Year	Water produced (MGD)	Water billed (MGD)	Non-revenue water (MGD)	Percentage of non-revenue water
2009-10	800	264.24	535.76	66.97
2010-11	835	293.94	541.06	64.80
2011-12	818	306.00	512.00	62.59

This issue was also highlighted in the Comptroller and Auditor General's Report on Government of NCT of Delhi of 2008 but there was no improvement in the situation as the extent of non-revenue water was pegged at 64.78 *per cent* in 2006-07. This indicates that DJB lacks seriousness in intent to tackle the problem of excessive non-revenue water.

The DJB stated (March 2013) that high non-revenue water in Delhi was largely attributable to unregistered consumers residing in JJ Clusters/Unauthorised/Unplanned areas which were yet to be covered by the planned network. Further, as per Government Policy, water supplied through tankers and from tubewells is not billed. However, the DJB has not provided any data relating to the effect of these factors on non-revenue water. Further, the extent of water supplied through tankers and tubewells was less than 15 *per cent* whereas the extent of non-revenue water was more than 60 *per cent*.

3.1.5.3 Loss of revenue amounting to ₹ 3950.90 crore due to short billing

The details of potable water produced, quantity to be billed (at 80 *per cent* of total production), quantity actually billed, average tariff and revenue loss due to short billing, during last three years were as shown in **Table 3.6.**

Table 3.6: Details of revenue loss

Year	Average production (MGD)	Quantity to be billed as per norms (MGD)	Average quantity billed (MGD)	Billed amount (₹ in crore) per year	Average tariff per MG (₹ in crore)	Revenue loss due to short billing (₹ in crore)
2009-10	800	640	264.24	971.39	3.68	1382.80
2010-11	835	668	293.94	926.17	3.15	1178.29
2011-12	818	654.40	306.00	1217.36	3.98	1389.81
					Total	**3950.90**

As can be seen, high percentage of non-revenue water resulted in loss of revenue of ₹ 3950.90 crore during the last three years.

3.1.5.4 Collection of arrears

Billing should be followed by collection of revenue against bills raised. Inefficient revenue collection results in accumulation of arrears. Year wise details of arrears of revenue at the beginning of the year, bills raised during the year, targeted collection, amount actually collected and arrears at the end

of the year during the years 2009-12 are given in **Table 3.7.**

Table 3.7: Details of arrears of revenue

(₹ in crore)

Year	Opening balance	Addition during year	Revenue target	Revenue collected	Arrears
2009-10	881.66	971.39	470.00	670.11	1182.94
2010-11	1182.94	926.17	805.55	924.86	1184.25
2011-12	1184.25	1217.36	1100.00	1202.47	1199.14

The above table indicates that in spite of achieving the targets fixed for revenue collection every year,the arrears amount has been increasing consistently. Scrutiny of records revealed that DJB arrived at the projected billing amount for 2012-13 by increasing last year's billed amount by 10 *per cent*. The target for revenue collection for 2012-13 was fixed at 75 *per cent* of this projected billing along with 10 *per cent* of arrears (8-10 years old) and 15 *per cent* (remaining arrears). Accordingly, the projected billing for 2012-13 was ₹ 1339.10 crore whereas the target fixed was ₹ 1300.28 crore. Fixing of target for revenue collection including arrears below the projected billing is not realistic since achieving this target would not reduce the arrears of revenue.

3.1.6 Public perception regarding service provided by DJB

3.1.6.1 Public opinion

To ascertain public perception on the quality of services provided by DJB, a questionnaire was sent to randomly selected 584 RWAs out of 1947 registered RWAs in Delhi. The questions sought information onthe duration of availability, sufficiency andquality of water supplied, the complaint redressal mechanism etc. Analysis of responses received from 111 RWAs revealed that:

- *Sixty four RWAs received water for less than two hours a day in summer season and 59 RWAs received water for less than two hours a day in winter season.*
- *Eighty seven RWAs did not receive sufficient water in summer season and 71 out of 87 RWAs did not receive sufficient water in other seasons also.*
- *Fifty nine RWAs felt that the water was unfit for drinking In summer season while 51 RWAs felt the same in winter season.*
- *Seventy eight RWAs were not satisfied with the complaint redressal mechanism of DJB.*

Thus, the outcome of survey strengthens audit conclusions regarding shortage of water and unequal distribution of water discussed in paragraphs 3.1.4.2, 3.1.4.3 and 3.1.4.5.

3.1.6.2 Redressal of public grievances

The Central Control Room (CCR) maintains Register of Complaints to record complaints received from the general public on various issues like no water,request for tanker, dirty water, sewerage blockage, leakage/burst, unauthorized water connection etc. Out of 56,806 complaints received between April 2009 and June 2012, entries in respect of 21698 complaints were test checked in audit. It was noticed that in 62.60 *per cent* of cases, remedial action was not recorded while in 15.39 *per cent* cases, action was either recorded late or no date was recorded. Only in 22.01 *per cent* cases, the entries reflected satisfactory action.

The DJB stated that although the complaints were sent to the Water Emergencies (units functioning under each civil division) concerned, records at CCR remained blank due to non receipt of feedback in most of the cases from them. In the absence of proper entries in the register, audit could not ascertain whether all the complaints were attended to in a timely manner.

3.1.7 Absence of Management Information System

Availability of timely, accurate and reliable data is of paramount importance for efficient functioning of any organization. It was observed that DJB has no management information system in place to collect and analyse data relating to requirement of water, production and distribution of potable water etc. In the absence of real time information, each WTP produces and supplies water to its command area on pre-determined quantities, irrespective of the actual demand. Further, in the absence of data relating to water received and billed by each civil division, the problems of transmission losses, non-revenue water, inequitable distribution of potable water etc. continue to persist.

In its reply, the DJB has stated (March 2013) that it had implemented various IT based projects such as FMS (for budget allocation), PMS (for project monitoring), RMS (for revenue monitoring) etc. and efforts were being made to integrate these through the common monitoring system. The reply does not cover the issue of collection and analysis of data relating to requirement of water, production and distribution of potable water.

Conclusion

The raw water available to Delhi is not sufficient to provide potable water to the whole population of Delhi. Construction of dams up river for augmentation of raw water in Delhi would take 6-7 more years to complete. The production of potable water by WTPs was found to be below the designed capacity. Due to absence of a proper measurement system, it could not be ascertained whether the wastage of water during treatment at Chandrawal was within permissible limits. The eight MGD recycling plant at Chandrawal was commissioned after a delay of more than four years whereas the recycling plant at Wazirabad was working below its capacity due to damage in pipeline.

Production of potable water at Haiderpur recycling plant was also found to be sub-optimal.

The DJB has neither a proper measurement system to measure water supplied to different areas nor reliable data about the population in different areas to regulate supply of water equitably. The allocation of jurisdictional areas among divisions was not conducive to efficient water management and it was not possible to measure water received and distributed by each division. In the absence of proper measurement system, there was no accountability for the water received in each division. Also, the distribution of potable water was not equitable with per capita supply ranging from three litres per capita per day to more than 300 litres per capita per day. Further, 25 *per cent* of the households in Delhi were receiving drinking water through tankers instead of pipes. The per capita supply to this population was only 3.82 litres per day against a prescribed norm of 172 litres. Metering of water supply at consumer end was not comprehensive due to which the non-revenue water, i.e. water which do not fetch any revenue remained more than 60 *per cent* during the last three years.

Recommendations

- *The DJB may pursue the matter of construction of dams up river on Yamuna so that adequate raw water is available to Delhi at the earliest.*
- *The DJB may ensure optimum utilisation of available raw water by optimising production at recycling plants at Wazirabad and Haiderpur.*
- *The DJB may strengthen manpower of its Quality Control Wing to properly monitor quality of drinking water.*
- *The DJB may endeavour to ensure supply of piped water to the whole of Delhi by laying adequate distribution lines.*
- *The DJB may put in place systems for measurement of water at each WTP, UGR and distribution line in order to make measurement of process wastage, equitable distribution of water, controlling of wastage and non revenue water possible so that each division remains accountable for the management of water.*
- *The DJB may endeavour to cover maximum population for fixation of water meter at consumer end so that wastage of water by consumers is minimised and revenue is maximised.*
- *The DJB may put in a place a Management Information System to collect and analyse data relating to production and distribution of potable water.*

3.2 Thematic Audit on Patient Care Facilities in Delhi Government Hospitals

Executive Summary

The thematic audit revealed that budgetary and expenditure control in the hospitals were inadequate leading to persistent savings under the head 'Machinery & Equipment', 'Supplies & Material' and 'Salaries' which indicates insufficient procurement of equipment, medicines and shortage of staff. Due to inadequate number of registration and pharmacy counters and shortcomings in their computerization, hospitals failed to handle large crowds. OPD services were affected due to shortage of medical equipment, medicines, injections, infrastructure and medical support items. The Emergency Departments were not providing required services due to lack of essential equipment, medicines and adequate staff. Numbers of beds, necessary equipment, patient trolleys were not commensurate with the number of patients that the hospitals have to attend daily. Laboratories and Diagnostic Services were found wanting on many counts. Some tests were not being conducted in the hospitals as test equipment were out of order. All five minor hospitals did not have blood banks, whereas the license for blood bank was not renewed in GTB hospital. All the hospitals were lacking in facility for purified and clean drinking water. Scrutiny of records of waste management system in GTB hospital revealed that it failed to rectify the defects in the incinerator and had serious lacunae in waste management system. The GTB and LN hospitals have been using ambulances, mainly for miscellaneous purposes instead of for the patients, and the ambulances were not equipped with essential equipment for basic life support system. In GTB hospital, a CT Scanner costing ₹ 7.17 crore, was procured on emergency basis but installed after a delay of 20 months from the stipulated date of installation. There were many cases where machines and equipment were not functional causing delay in treatment and inconvenience to patients.

3.2.1 Introduction

The Department of Health and Family Welfare (the department) of the Government of NCT of Delhi (GNCTD) is headed by the Principal Secretary who controls the functioning of the Directorate of Health Services, the Directorate of Food Adulteration, Drug Controller, 37 hospitals, Autonomous Bodies* under GNCTD and other National Health Programmes. The department caters to the health needs of nearly 160 lakh population of Delhi and also shares the burden of migratory and floating population from neighboring States, which constitute nearly 33 *per cent* of total intake at major hospitals in Delhi.

3.2.2 Scope of audit and methodology

The thematic audit covered the period 2009-10 to 2011-12 with specific focus on patient care facilities in government hospitals including areas, such as, financial management and manpower resource management.

10 out of 37 government hospitals were selected on the basis of bed strength of hospitals for audit scrutiny as given below:

No. of beds	Total hospitals	Hospital selected	Name of the hospital†
More than 500	5	5	GTBH, LNH, DDUH, BSAH, GB Pant
100 to 500	32	5	LBSH, RTRMH, BJRMH, AAAGH, ASBH

Audit examined the records relating to registration, emergency wards, OPD, laboratory, different wards of hospital, kitchen etc. Other issues which are relevant to patient care like drinking water, cleanliness, air conditioning, air purifier, waste management and ambulance services were also covered in audit. Physical surveys to obtain feedback from the patients were conducted and audio / video recording of the concerned patient care units were made to assess the quality of patient care facilities being provided in the hospitals. Audit observations were issued to the concerned hospital authorities seeking their views. The comments, wherever received, were considered and appropriately incorporated in the Report.

IHBAS, Delhi AIDS Society, CATS.

†*(i)Guru Teg Bahadur Hospital (GTBH), Lok Nayak Hospital (LNH), Deen Dayal Upadhayay Hospital (DDUH), Baba Saheb Ambedkar Hospital (BSAH), Govind Ballabh Pant Hospital (GB Pant) (ii) Lal Bahadur Shastri Hospital (LBSH), Rao Tula Ram Memorial Hospital (RTRMH), Babu Jagjivan Ram Memorial Hospital (BJRMH), Aruna Asaf Ali Government Hospital (AAAGH), Acharyashree Bhikshu Government Hospital (ABGH)*

3.2.2.1 Audit criteria

The patient care facilities in the hospitals were benchmarked against the criteria derived from the following sources:

(i) Budget allotment and expenditure statements provided by the hospitals,

(ii) The status of sanctioned strength and men-in-position provided by the hospitals,

(iii) General Financial Rules, notifications and various orders issued by the Government, the department and hospital authorities,

(iv) The physical visits to the various departments and locations of the selected hospitals, and

(v) Interaction with the hospital authorities, medical as well as paramedical staff, patients and their attendants.

Audit findings

3.2.3 Budget allocation and utilization

The budget allocation, expenditure and savings for the period 2009-10 to 2011-12 in respect of 10 selected hospitals are given in **Annexure-3.4.** There were persistent savings, though not significant, under the heads 'Salaries', 'Material & Supplies' and 'Machinery & Equipment', during the period covered under audit. The position of savings during 2009-12 under these heads in eight hospitals is summarized in the **Table 3.8.**

Table 3.8:Summarized position of savings (2009-12)

(₹ in lakh)

Name of hospital	Savings under 'Material & Supplies' and 'Machinery & Equipment'			Savings under the head 'Salary'		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
LNH	13.45	31.53	192.30	16.91	100.73	200.20
GTBH	30.90	423.27	4.27	25.05	220.20	486.30
BJRMH	16.23	45.52	0.78	6.90	30.09	5.77
LBSH	0.04	97.25	4.34	232.72	78.50	24.52
RTRMH	1.60	4.04	48.64	2.69	40.88	15.46
DDUH	2.45	113.58	2.54	8.42	37.26	11.31
BSAH	5.77	--	79.64	4.40	78.00	21.98
GB Pant	--	--	819.90	--	--	244.60

The status of savings indicates that hospitals failed to utilise the available budget allocation in full, particularly LNH, GTBH and GB Pant. The savings under above mentioned heads adversely affect patient care facilities due to shortage of medical staff, procurement of medicines and equipment. Hospitals stated (December 2012) that the reasons for savings under heads 'Material & Supplies' and 'Machinery & Equipment', were non-approval or non-finalisation of purchase proposals by the Equipment Procurement Cell (EPC) of the department, non-supply of drugs and medicines within the scheduled time, 10 *per cent* cut in non-plan expenditure, and reasons for savings under the head 'Salaries' were resignation of senior and junior resident doctors, non-payment of ACP/MACP[‡] arrears (GTBH) and non filling up of vacant posts (LBSH).

3.2.4 Human resource management

The shortage of medical, para-medical and nursing staff affects adversely the quality and efficiency of medical care that hospitals are expected to provide. The status of sanctioned strength and men-in-position in these cadres during the period 2009-12 in respect of 10 selected hospitals is given in **Annexure-3.5.** The status of percentage shortage in six hospitals is summarized in the **Table3.9**given below:

Table 3.9: Staff shortage (in *per cent*)

Name of hospital	Doctors			Staff Nurses			Pharmacists		
	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12	2009-10	2010-11	2011-12
GTBH	24	35	36	11	11	17	13	13	17
LNH	33	25	33	8	47	37	5	5	5
RTRMH	15	17	8	1	6	2	17	17	–
DDUH	5	5	13	41	38	23	–	–	6
BSAH	17	13	18	2	2	7	–	–	–
GB Pant	--	–	32	–	--	42	–	–	22

The status given in the table points to the fact that despite a continuous overall increase in number of patients, there was a severe shortage in doctor's cadre followed by staff nurses.

The **GTB** hospital stated **(December 2012)** that it conducted interviews every month to fill up the posts of Junior and Senior Residents on adhoc and emergency basis and regular interviews were conducted twice a year to fill up the vacant posts. Regarding shortfall of Staff Nurses and Pharmacists, it was stated that the hospital had already initiated the process of filling up the vacant posts on contract basis. The **LN** hospital and **RTRM** hospital stated that in addition to official procedure for recruitment

[‡] *Assured career progression/ Modified Assured career progression*

of medical/para-medical staff, efforts were being made to recruit Junior and Senior Residents at the level of hospital itself. The **BSA hospital** stated that interviews for selection of Junior and Senior Residents had already been held and doctors were under process of joining.

3.2.5 Registration of patients

It was observed that 3000 to 4000 patients in big hospitals (with > 500 beds) and 1000 to 1500 patients in smaller hospitals (with < 500 beds) visit daily for registration. There are four to 18 counters for registration of patients in selected hospitals where registration is done from 9:00 AM to 12:00 PM. Audit visited the registration counters and observed long queues of patients in front of registration counters. Patients have to wait for one to two hours for registration, and in some cases they have to re-visit the next day for registration. This indicated that the number of counters and the working hours of registration counters were not sufficient to handle the volume of registration work.

Overcrowded registration counters of LBSH

The deficiencies noticed with regard to registration of patients in selected hospitals are discussed below:

3.2.5.1 Inefficient counter services

The registration work in four hospitals (ABGH, LNH, GTBH and AAAGH) had been outsourced. There were long queues of patients in front of registration counters and staff at counters failed to register the patients quickly. It was seen that in ABGH and LNH, patients were going back without registration. Interaction with counter staff at **ABG** hospital and **LN** hospital revealed that they were paid only ₹ 2000-3500 per month. Audit observed that there was a frequent change of staff at the counters and they were unable to handle large number of patients.

The **ABG** hospital in its reply stated **(December 2012)** that there is no complaint by the employees regarding the wages. Penalty was being imposed and deduction from the contractor's bill made for non-functional counters as per clause-9 of the agreement. The **LN** hospital stated that it had procured counter services from contractor at ₹ 9892 per counter per month. The replies are not tenable as hospitals did not ensure a mechanism in place to handle large volume of patients visiting the hospitals everyday.

3.2.5.2 Shortcomings in computerization

Registration services have been computerized in most of the hospitals, however, instances of manual registrations were also observed during visit to the counters. It was observed that two out of four in **ABG** hospital, five out of 18 in **GTB** hospital, four out of 10 in **LN** hospital and five out of eight registration counters in **DDU** hospital were not functioning. In **AAAG** hospital, the registration was being done manually. Non-computerization and break down of computers affects registration of patients. Audit observed that one or two counters always remained out of order. In response to audit observations, hospitals replied as follows:

- **ABG** hospital stated that manual registration provisions exist as and when computer system fails,
- **AAAG** hospital stated that the matter of computerization of registration had been taken up with the DHS , timely payment was not made to the outsourced agency for want of approval of the Finance Department,
- **GTB** hospital stated that the paraphernalia of the agency was not up to the mark and the agency had been directed to rectify the shortcomings, and
- **LN** hospital stated that maintenance of computers was being done by the vendor.

The replies are not tenable as the final responsibility of running the counters smoothly was that of hospital authorities.

3.2.5.3 Lack of Infrastructure

Visits to registration counters at selected hospitals revealed numerous shortcomings which are discussed below:

- Two out of ten ceiling fans, one exhaust fan and PA system were not functional **(ABGH)**,

- The registration counters were in open without any roof causing inconvenience to patients and most of the area at registration counter was occupied by the parked vehicles (**AAAGH**),
- Ten out of 20 fans, one table fan and 17 tube lights were not functional. The chairs and tables were in bad condition (**GTBH**), and
- Registration hall was not spacious for rush of patients and CCTV cameras were non-functional (**DDUH**).

Hospitals stated that PWD had been requested to make all the installations functional (**ABGH**), a small shed had been erected and marking done to make the area reserved for patients' queues (**AAAGH**), and matter for repair had been taken up with PWD (**GTBH**).

3.2.6 OPD services

Visits to OPDs of selected hospitals revealed following shortcomings:

3.2.6.1 Shortage of medical equipment

Interaction with staff revealed that there was shortage of essential medical equipment in OPDs, for example:

- one RVG Machine was under repair since October 2011 (**Dental OPD,ABGH**),
- nine Aneroid Digital BP Instruments (**Medicine OPD,GTBH**), and
- Impedance Audiometry machine was out of order for the last two years and declared beyond repair (**ENT OPD, BSAH**),Laparoscope machine was not available (**Surgical OPD**) and Lumber Traction machine was not working since June 2012 (**Physiotherapy OPD, RTRMH**).

Responses (February 2013) of the hospitals were as follows:

- repair of RVG machine is under process (**ABGH**),
- demand had been sent to the store (**GTBH**), and
- observations of audit were accepted (**RTRMH**).

3.2.6.2 Shortage of medicines and injections

During interaction with staff in Injection Room of **DDU** hospital, it was found that important injections such as Inj. Penidura 12 lac (Benzathin penicillin 12 lac.) Inj. Neurobin, Inj. HCG 5000, 10000 were not available. The ARS (Anti Rabbies Serum) which is used for treating dog-bites was also not available in the hospital since March 2012.

The hospital stated (February 2013) that these injections were not required on regular basis, however, the demand had been sent to CPA and the same would be available at the earliest.

3.2.6.3 Shortage of infrastructure

In Medicine OPD of **GTB** hospital, ACs in three rooms were not available, ceiling fan in one room and most of the tube lights including in OPD verandah were not working. In Gynae OPD, lights on the examination tables were not available. In **RTRM** hospital, tube lights were not functional in Medicine, Child and Ortho OPDs. In Skin OPD of **LN** hospital, centralized AC system was not working. In Gynae OPD of **AAAG** hospital, fans were not working.

Hospitals stated that matter had been taken up with PWD (**GTBH**), fans in Gynae OPD had been installed (**AAAGH**), audit observations were accepted (**RTRMH**) and complaint of AC had been made to PWD (**LNH**).

3.2.6.4 Shortage of medical supporting items

In Eye OPD of **BJRM** hospital, one Slit Lamp Table, one Retinoscope and USG Scan Biometry with probe Biometric was not working, in ENT OPD, three Bulls Lamps were out of order. In Gastro/Cardio OPD of **GB Pant** hospital, weighing machine and X-ray viewing box were not available. In Gynae OPD of **GTB** hospital, there were nine examination tables for 11 rooms with 3-4 doctors attending the patients in each room.

Hospitals stated that in Eye OPD, one Slit Lamp Table was being repaired, two Retinoscopes had been condemned, one USG Scan Biometry and Bulls Lamps were under repair (**BJRMH**), demand for tables and lights had been sent to the store (**GTBH**) and items were provided as per the requisition from the In-charge (**GB Pant**).

3.2.7 Casualty / Emergency

The emergency department is required to render comprehensive services from elementary first aid and general out patient services to sophisticated management of surgical and medical emergencies and full scale trauma care. Visit to Casualty / Emergency departments revealed that adequate facilities like beds, equipment, patient trolleys, ceiling fans, lights and air conditioners did not exist as discussed in succeeding paragraphs:

3.2.7.1 Patient trolley

In **LN, GTB** and **DDU** hospitals, patient trolleys were out of order or not available in the casualty, but some trolleys were kept locked and chained in separate hall.

Hospitals stated that three patient trolleys were now repaired (**GTBH**), five to seven trolleys were available in Casualty entrance along with 2-3 stretcher bearers (**LNH**), and in Casualty, 13 mobile trolleys were available round the clock (**DDUH**). However, on verification in February 2013, it was observed that no mobile trolley/wheel chair was readily available in casualty (DDUH).

3.2.7.2 Equipment and machines

In GTB hospital, all seven wall-mounted BP apparatus were not working and there was shortage of two Glucometers and two ECG machines. In Pediatric Emergency Ward, two ventilators, Vital Sign Monitor SPO2 (BP88) (since June 2011), three Double Syringe Pumps (since August 2011), Phototherapy and Breath Live Ventilator (since July 2011), two Mobile Warmers, three Air Ventilator System (since May, 2010), Resusesitation Trolley (since July 2012), Oxygen Analyzer (since March 2012) and ABG Machine (since May 2012) were not working. BP Cough (Ped. size) small, medium and large, were not available in the emergency. In **BJRM** hospital, SPO2 Oxygen Monitor was not available in the casualty. In **RTRM** hospital there was no ventilator in the casualty.

Hospitals stated (December 2012) that all seven wall-mounted BP apparatus and two ECG machines were currently working (**GTBH**), SPO2 probe and Monitors were in working condition (**BJRMH),** and observations of the audit had been noted and these had been included in the expansion plan (**RTRMH**).

3.2.7.3 Non-functional ceiling fans, lights and ACs

Six spilt ACs, five fans and 10 tube lights were not working and most of the electricity plug-points were broken (GTBH). Three out of five window ACs were not working (AAAGH).

Hospitals stated that split ACs, fans and tube lights were now working. Some electrical plugs had been repaired and others were in the process of repairing (GTBH). The matter regarding ACs had been taken up with the PWD (AAAGH).

3.2.7.4 Shortage of beds

In DDU hospital, the emergency wards had a bed capacity of 50 which would mean availability of 18250 bed days[§] during a year. Against this, annual admissions during 2009-11, ranged from 33920 to 44622 patients, meaning average bed occupancy was 215 *per cent*. Thus at times, two to three patients had to be accommodated on a single bed. In **LN** hospital, there were only 11 beds in main casualty and each bed was occupied by

[§] Number of days in a year

two patients whereas 11 beds in poly trauma were lying vacant. In medicine emergency ward, two beds were found broken.

The LN hospital stated that they follow the policy of non-refusal i.e. hospital cannot refuse admission of patients, therefore, there were more than one patient on a bed in Emergency Ward. The DDU hospital stated (February 2013) that matter was being taken up with the authorities to augment the bed capacity.

3.2.7.5 Miscellaneous shortcomings

(i) Unserviceable and obsolete store items were lying in the Emergency Ward giving a dirty look and covering precious space due to which space left for patients, became insufficient (**GTBH, ABGH and LNH).** The **LN** hospital and ABG hospital stated that the condemnation process for unserviceable items was ongoing and would be completed after obtaining the condemnation certificate.

(ii) Cardiac Defibrillator and refrigerator (**AAAGH**) and two ventilators in poly trauma (**LNH**) were out of order. Air purifiers were not available (**LNH**) and injections/medicines were kept in a window AC, instead of refrigerator (**AAAGH**). Hospitals stated that ventilators were transferred to poly trauma ward for repair (**LNH**) and Cardiac Defibrillator had been recommended for condemnation (**AAAGH**).

3.2.8 Facilities in wards

During the visits to different wards of the hospitals, it was observed that average bed occupancy was well above 100 *per cent*. Admission of more patients than available bed strength causes both stress and discomfort to the patients, besides exposing them to risk of infection. Audit observed following shortcomings in different wards of hospitals:

3.2.8.1 Shortage of beds

The status of beds and patients admitted daily is depicted in the given below:

Name of Hospital	Name of the ward	Available beds	Daily admissions
GTBH	Gynae (PNC)	42	60-70
	Gynae (ANC)	40	80-90
	Pediatric	60	80-90
	Eye	40	55-60
BJRMH	Male General	36	20-25
	Female General	29	30-35
	Gynae	26	45-50
BSAH	Surgical	42	45-50
	Gynae	42	90-95
	Medicine	42	90-95
DDUH	Medicine	42	90-100
	Gynae	45	95-100

Overcrowded Gynae Ward of DDUH

Apart from the above, some beds were laid in open area/verandah (Eye and Ortho ward of **GTBH**). In Cardiac Care Unit, eight beds were available against sanction of 12 beds (**BSAH**). In Gynae ward, bed occupancy was upto 300 *per cent,* as 3-4 patients along with their babies were on a single bed (**LBSH**).

The GTB hospital stated that some time, bed occupancy exceeds because few patients go directly to OT for small surgeries and get discharged the same day. Keeping in view the over-crowding in Gynae ward, a proposal for construction of 50 bedded ward was under consideration (**BJRMH**). Being a government hospital, bed occupancy larger than its capacity was unavoidable (**BSAH**) and growth of population on account of migration from other States and other reasons, led to three times the bed occupancy rate (**LBSH**).

3.2.8.2 Insufficient supply of medicines/injections/equipment

Interaction with the patients and staff nurses revealed that there were shortages of medicines and injections etc. in the wards, forcing patients to purchase medicines and injections from the open market.

In **GTB** hospital, there was shortage of medicines, injections, syringes, needles etc. in Gynae (PNC), Pediatric and Eye Ward. In Pediatric Ward, Portable Pulse Oxymeter and Pediatric Stethoscope were not available. Manual BP apparatus, Ultrasonic Nebulizer, Vol. Infusion Pump and one Syringe Infusion Pump were not working. In Female Ward of **BJRM** hospital, Vital Sign Monitor, Suction Machine, Air Purific System, Pulse Oxymeter, Multiport Nebulizer, Ultrasonic Nebulizer were out of order

since 2006. In Gynae Ward of **LN** hospital, two Cardiac Monitors were lying unserviceable from March, 2012.

Hospitals stated that new equipments were in the process of procurement (**BJRMH**), Cardiac Monitors were under repair and the hospital had been demanding bio-medical engineers for upkeep of sensitive electro medical equipment (**LNH**).

3.2.8.3 Shortage of supporting items

In Pediatric and Gynae Wards (PNC & ANC) **of GTB** hospital, adapter of baby weighing machine, weighing machines and insect killers were not available. In Female Ward of **BJRM** hospital, bed pans and in Male Ward, equipment like refrigerator, desert coolers and I/V stand were not available. In Female Surgery Ward, Gynae Surgery Ward, Eye and ENT (Male) and in Male Ortho Ward of **AAAG** hospital, insect killers were not working.

Hospitals stated that the desert coolers had been provided and there was no shortage of I/V stands (**BJRMH**) and insect killer were working (**AAAGH**).

3.2.8.4 Lights, ceiling fans and ACs not working

It was observed that in wards, lights, ceiling fans and ACs were not working. For instances - one air cooler and nine tube lights in Pediatric Ward and 51 tube lights in Gynae Ward (PNC) (**GTBH**), all the emergency lamps and most of the tube lights in Cardiology Female Ward (**GB Pant**), invertor, bed lamps, one air cooler, four ceiling fans in Gynae Ward and one refrigerator, one X-ray viewing box, 15 tube lights, 24 bed lamps in General Surgery Ward (Ortho/Surgery/Eye/Ent/Medicine) (**ABGH**) were not working.

The **ABG** hospital stated that PWD had been requested to rectify the defects as pointed out by audit.

3.2.8.5 Patient beds, bed mattresses and bed sheets

During visits to various wards, it was observed that bed mattresses, bed sheets and blankets were in bad conditions (dirty and torn) or in short supply in Pediatric Ward of **GTB** hospital, Female General Ward of **BJRM** hospital, Ward-3 (Male & Female), Cardiology Female Ward of **GB Pant** hospital, Female Surgery Ward, Ortho Wards (Male and Female) and Eye / ENT (Male) of **AAAG** hospital, General Surgery Ward of **ABG** hospital and post Surgery and Gynae Ward of **DDU** hospital.

The AAAG hospital stated (December 2012) that torn mattresses had since been changed. The DDU hospital stated (February 2013) that necessary

directions had been issued to HODs to take urgent action for condemnation of these items and submit the demand for their replacement.

3.2.8.6 Idling of machines

One Kertometer Scan, Ultra Sound Biometery with monitor and other equipment related to Ophthalmology remained unutilized as there was no eye specialist since 2008 in Eye Ward of **BJRM** hospital. Endoscopy in CCU and one TMT machine in Dialysis Ward were underutilized due to shortage of staff in **BSA** hospital. The dialysis is done by the hospital's trained technical staff though they are not trained in dialysis. In Medicine-Ward 21 and 22, central oxygen gas supply line, which caters to OT, ICU, CCU and Nursery Wards etc. was out of order for the last eight months **(BSAH)**.

Hospitals stated (December 2012) that no Eye Specialist had been posted though repeated reminders had been sent to the H&FW Department (**BJRMH**), the post of Cardiologist and Gastroenterologist had already been advertised and the central oxygen and compressed air were working but central suction was out of order which was not repaired by the parent firm (**BSAH**).

3.2.9 Laboratories and Diagnostic Services

Timely and expeditious diagnosis is a pre-requisite to early curative treatment. There are different types of laboratories (labs) in hospitals. Visit to different hospitals revealed that some tests were not conducted in labs and in some other cases, patients get their tests done from the market as machines were out of order. The shortcomings are discussed in subsequent paragraphs:

3.2.9.1 Shortage of X-ray films and chemicals

InRadiology lab of **BJRM** hospital, X-ray films of different sizes were not available for last six months (January to June 2012). The hospital stated (December 2012) that X-ray films were now available and there was no shortage of X-ray films. The reply did not contradict the audit observation and confirmed non-availability of films.

3.2.9.2 Break down of equipment

The following equipment were not found working in selected hospitals:

- Electrolyte Analyzer since May 2012. **(AAAGH),**
- one pharmaceutical refrigerator in Histopathology lab, one centrifuge machine, one refrigerator in emergency lab, two incubators **(ABGH),**

- one CT scan machine, one X-ray machine of 1000MA for want of power supply installation (**GTBH**), and
- LFT, KFT, Lipid Profile Testing Machine in Pathology department (**DDUH**).

Hospitals stated (December 2012) that the defects in Electrolyte machine had already been rectified in September 2012 **(AAAGH)**, all non-functioning equipment had been made functional (**ABGH**) and for LFT, KFT etc. the fully auto analyzer was not working and EPC procurement was still underway (**DDUH**). These replies further corroborate audit observations.

3.2.9.3 Shortage of staff

There was no post of Microbiologist in the **ABG** hospital, therefore, all the Microbiological investigations were done from outside. Three ultrasound machines remained unutilized since March 2012 due to non deployment of Radiologist.

The hospital stated that post of Microbiologist had not been sanctioned as it was not included in the norms for a 100 bedded hospital and added that post of Radiologist was vacant and they could not recruit Senior Resident on last four occasions as no candidate applied for the post **(ABGH).**

3.2.9.4 Non-availability of equipment

In Pathology lab of RTRM hospital, MIURA equipment (fully automated bio chemical analyzer), used for blood tests i.e. LFT, KFT and Uria was not working. Accepting the audit observation, the hospital stated that MIURA Auto-analyzer was a closed system and its running cost is high. It was trying to switch over to an open system for which order has been placed.

The hospital further stated (February 2013) that they were using Semi Auto-analyzer to carry out lab services as a stop gap. The MIURA Auto-analyzer can do 20 tests at a time whereas the Semi Auto-analyzer does only one test at a time. The reply is not tenable as neither the existing equipment is working nor the alternate viable arrangement has materialised.

3.2.9.5 Non-availability of facilities for tests

- In Pathology lab, essential items like anti A and B reagents (10ML) for blood grouping and Creatinine Eshmation kit Jaftc Method (400ML) were not available (**BJRMH**).
- In Microbiology department, Widal, HBSAG detection, HCV detection, Typhidot, Malarial Serology, Bid Culture, Swab Culture, ASO and ANF tests were not being done due to non-availability of kits (**BJRMH**).

- Thyroid profile, S.Prolactin, HbA1C and TBEL1SA, I9G, I9H tests were not being done (**AAAGH**).
- Various diagnostic investigations/tests like KFT, LFT, Lipid profile, uric acid were not carried out in the hospital. In Gynae (PNC & ANC) Ward, patients admitted that for various diagnostic investigations like blood tests, ultrasound, LFT and KFT, they are compelled to get them done from private diagnostic centres. In Pediatric Ward, tests like Calicum Phosphate and Alkaline Phosphate were done from outside (**GTBH**).
- The test facilities like Rubella 1gm, Anaerobic culture, T.B. Culture, Viral Culture, Histopathology, Thyroid function test and HB A/c (Glycosylated Hb) were not available in the hospital (**LBSH**).
- CT scan facility was not available and has been outsourced in emergency cases and some cases were referred to other hospitals (**BSAH**).

The **BJRM** hospital stated that all the reagents for blood storage were being made available and blood storage facility had been started in the hospital. A few kits which were not available were being made available. The reply confirms the audit observation that these essential items were not available in the hospital for a long time. The **LBS** hospital stated that for specialized treatment/tests like Rubella 1gm, Anaerobic culture, TB culture, viral culture etc. patients are referred to the tertiary care hospitals where such facilities are available. The reply of the hospital, thus, is in line with the audit observation that these facilities are not available in-house.

3.2.10 Waiting period for various tests and surgeries

Audit observed that there was a long waiting period for certain surgeries and tests in selected hospitals as enumerated below:

- **BSA hospital-** There was waiting period for Ultrasound General (2 months), Colour Doppler (8 months), I.V.P (1½ month), Laparoscopic Surgery (2 to 8 weeks), PCNL, URS, TURP, TURBT, Open Surgery ESWL Cystoscopy etc. (7 to 30 days). The hospital stated that waiting period for various tests and medical procedure was mainly due to shortage of doctors and para medical staff.
- **LBS hospital –** There was long waiting period for operation for the ENT (6 months), Surgery (2 to 3 months), Dental (1 month), Eye (5 to 6 months), Gynae (1 to 2 weeks) and Radiology (1½ month). The hospital stated that due to growth of population, patient load had tremendously increased leading to increased waiting period.

- **DDU hospital -** There was waiting period for conducting TFT (3 weeks to 3 months), Laparoscopic Surgery (3 months), Open Major Surgery (3 months), IVP (3 weeks), C T Scan (2 to 3 weeks) and Ultrasound (3 to 4 weeks). The hospital stated that all patients could not be accommodated for surgery at the time of reporting to OPD. Hence, there was a waiting list for surgeries.
- **RTRM hospital-** There was waiting period for operations/surgeries like general surgery (3 to 4 weeks), Orthopedics (3 to 4 weeks), Gynae (1 month), ENT Ward (3 to 4 weeks) and Ultrasound (2 months). The hospital stated that the waiting time for various services indicated the acceptability and demand for the services being offered by the hospital.

3.2.11 Pharmacy

As per Committee Report (2003) on norms for manpower in hospitals for the Government of NCT of Delhi, a pharmacist can entertain 180 patients, depending upon number of drugs per prescription. Also, all the medicines and injections prescribed by the doctors should be made available free of cost to the patients in the hospital. Scrutiny of records made available to Audit and visit to pharmacy counters revealed the following:

3.2.11.1 Overcrowded pharmacy counters

In DDU and BSA hospitals, the status of number of patients and counters during 2009-11 is shown in **Table 3.10.**

Table 3.10: Status of counters and number of patients

		DDU hospital			BSA hospital		
Sl. No.	Year	Average patients per day in OPD	Nos of counters	Patient counter ratio	Average patients per day in OPD	Nos of Counters	Patient counter ratio
1	2009	2760	6	460:1	3699	7	528:1
2	2010	2446	6	407:1	3799	7	543:1
3	2011	2201	6	367:1	4010	7	573:1

From the above table, it is clearly evident that the pharmacy counters were two to three times overburdened as compared to the norms. It was further observed that due to crowd of patients, it takes one to two hours for getting the medicines in **LBS and LN** hospitals. The **LN** hospital stated that there was acute shortage of staff as some staff was diverted to the DGEHS and Polio clinics. The DDU hospital stated (February 2013) that medical counters were under renovations and now eight of them are functional. The BSA hospital stated that sanctioned posts of pharmacist were inadequate and exercise had been under taken for assessing and creation of

posts. A stop gap arrangement had been made on short term basis by diverting the pharmacists from other hospitals.

3.2.11.2 Shortage of infrastructure

In **GTB hospital**, due to acute shortage of furniture like racks and almirahs, most of the medicine boxes were kept on the floor and only 11 out of 22 fans were working. The hospital stated that the matter had been taken up with PWD.

3.2.11.3 Shortage of medicine

Scrutiny of records and interaction with patients revealed that many essential drugs/life saving drugs, as prescribed by Directorate of Health Services, were not available on many occasions in **DDU** hospital during 2009-10 and 2011-12. In **GTB** hospital, 31 medicines were not available in the pharmacy from 7 to 25 September 2012. In **RTRM** hospital also, patients complained that they had to purchase medicines from outside due to non-availability of prescribed medicines.

Hospitals replied that (i) most of the medicines were procured and made available through CPA only. However, all out efforts are being made for procurement of drugs (**DDUH**), (ii) circular had been issued to all doctors for prescribing generic drugs and demand of medicines were being timely submitted to purchase branch for procurement (**GTBH**), and (iii) Audit had mentioned only a few cases which means more or less the hospital was able to cope up with the demand (**RTRMH**).

3.2.12 Blood Bank

Blood Bank establishment, screening of blood, availability of blood and expiry was examined in **GTB** hospital during audit and following shortcomings were noticed:

3.2.12.1 Non-renewal of license

Validity of license for operation of blood bank/processing of whole human blood for components/manufacture of blood products was valid upto December 2011. The hospital authorities submitted application for renewal of license but certificate of renewal was not received as of October 2012. The hospital stated that it had applied to the licensing authorities well in time for renewal of license for the Blood Bank and it was the responsibility of the Drug Control Department to renew the same. However, fact remains that the Blood Bank was running without a valid license.

3.2.12.2 Shortage of specialists

The hospital has been collecting 32000 units of blood in a year, and it required three faculty/specialist/medical officers, as against this only one senior staff presently posted there. The hospital stated that all efforts were being made to appoint the required faculties.

3.2.12.3 Non-utilization of blood

It was observed that hospital discarded 1.6 to 9.9 *per cent* of Blood from 2008 to September 2012. Particularly in the year 2010, 9.9 *per cent* (3258 units) of blood expired, which was on higher side.

The hospital stated that discard rate of blood, on an average, was about 2 to 5 *per cent*, with an exception of 9.9 *per cent* in September 2011. But discarding, due to expiry, reactive positive samples and leakage etc. up to 10 *per cent* was acceptable as per guidelines. The hospital further stated (February 2013), that there were no written guidelines for wastage of bloods, however, during their routine inspection, the Drug Inspector accepts discard due to expiry reactive and leakage etc., up to 10 *per cent*.

Further, in **BJRM, AAAG**, **ABG** and **RTRM** hospitals, there was no blood bank and they were attached with other big hospitals for their blood requirement. Hospitals stated as follow:

- Blood bank could not be established due to shortage of space (**BJRMH**),
- Their hospital is a 100 bedded hospital having functional Blood Storage Centre (**AAAGH**),
- The hospital has Blood Storage Centre having tie up with the DDU hospital for requirement of Blood (**ABGH**), and
- The hospital has Blood Storage facilities only but a modern blood bank had been planned, the drawings for which had been approved by the statutory bodies (**RTRMH**).

3.2.13 Drinking water

Every hospital should be equipped with modern technique of supplying purified and clean water round the clock. Audit of two selected hospitals revealed the following shortcomings:

3.2.13.1 Non-availability of drinking water

Visit to different locations of **LN, GTB, DDU and BSA** hospitals revealed that drinking water was not available at most of the places and doctors, patients and attendants carry water from their homes or purchase from open market.The **DDU** hospital stated (February 2013) that the matter had been taken up with PWD authorities to augment the water supply. The

BSA hospital stated (February 2013) that 26 water coolers installed at different points in the hospital, are providing regular and sufficient drinking water facility to the patients. Thus, hospitals initiated action only after the deficiencies were pointed out by Audit.

3.2.13.2 Non-functioning of water coolers and aqua guards

There are 85 and 55 water coolers with aqua guards installed for providing drinking water to patients in **GTB** and **LN** hospital respectively. Visit to 10 different locations in both the hospitals, revealed that neither water coolers nor aqua guards were functional (**Annexure-3.6**). This is despite the fact that in both the hospitals, water coolers and aqua guards were on Annual Maintenance Contract.

3.2.13.3 Unhygienic conditions

In four hospitals **(LNH, GTBH, DDUH and BSAH),** water coolers were very dirty and were placed at unhygienic sites. Even, in some places water tanks were not cleaned. On verification (February 2013), no improvement in cleanness was observed.

3.2.13.4 Unsatisfactory test reports of water

In **GB Pant** hospital,most of the water testing reports from various locations of the hospital premises were unsatisfactory/not safe for drinking purpose. To improve the quality of water, the hospital decided in April 2012 to replace all old water pipe lines from its main distribution point. However, the work has not been started as of July 2012.

Hospitals stated (December 2012) that as reported by PWD, drinking water facilities were in working condition (**GTBH**), the water coolers in the hospital were being used by the public visiting the hospital and by even people from nearby localities. As a result of overuse, there was frequent breakdown of the coolers and as and when it occurs, PWD gets them repaired through AMC. The hospital tries to keep the area clean and tidy (**LNH**). The issue has been taken up with PWD officials in all the meetings **(GBPH).** The replies are, thus, acceptance of audit observation without any contradiction.

3.2.14 Cleanliness of toilets, bathrooms and other premises

Audit observed during interaction with staff and visit to various OPDs, wards, diagnostic centres etc., that corridors, passages, staircases and the corners of all these areas were littered with left overs, dirt and waste materials. Shortcomings in maintenance of toilets and bathrooms are as under:

3.2.14.1 Blockage of toilets

Some toilets were found locked (Gynae –PNC of **GTBH,** Casualty Ward of **BSAH,** Cardiology Female Ward of **GBPH**), drainage of toilets of Ortho Ward was blocked **(GTBH and AAAGH**), toilets were in pathetic condition, lacking sanitation and were blocked (**RTRMH** and Neuro Surgery Ward Male and Female of **GBPH**).

Hospitals stated (December 2012) that all blockages had been removed (**AAAGH**), one toilet was locked as it was under repair **(BSAH),** PWD had been asked to change the pipelines and the work had been partly completed (**RTRMH**) and the work of repair of toilets and bathrooms by PWD was under tendering process (**GBPH**).

3.2.14.2 Non-availability of sanitary staff

In Gynae (PNC) Ward of **GTBH,** safai karamchari was not available in the night shift and in Casualty / Emergency Ward of **BSAH**, no sanitary worker was seen on duty. The **BSA** hospital stated that presently hospital housekeeping service was outsourced and the vendor had deployed only 70 workers against the requirement of 108 workers for sanitation.

3.2.14.3 Non-availability of sanitary fittings

- There were no wash basins in toilets of Ortho Ward (**AAAGH**).
- Cisterns were not available in Gynae and Casualty Ward and commodes were broken in Casualty Ward (**ABG** hospital).
- In Neuro Surgery Ward (Male & Female) of **GBPH,** most of the urinals were broken.

Hospitals stated that estimates had been approved for renovation of all toilets and PWD had started the work (**ABGH**) and the work of repair of toilets and bathrooms by PWD is under tendering process (**GBPH**).

- **Bathrooms used as stores –**In Gynae Ward of **ABGH**, bathrooms for patients were being used as stores.
- **Non-availability of separate toilets for male and females –**Males and females were using only one toilet available in Casualty Wards of **AAAG** hospitaland **BSA** hospital.

3.2.15 Management of bio-medical waste

The Ministry of Environment and Forests, GoI notified in July 1998, the Bio-Medical Waste (Management and Handling) Rules, 1998 for regulating the generation, storage, transportation, treatment and disposal of bio-medical waste. Audit of the Department of Bio-Medical Waste Management (BMWM) of **GTB** hospital, revealed that an incinerator plant was installed by the PWD in February 1999 in the hospital, at a cost of ₹

42.98 lakh for processing the bio-medical waste. During an inspection, a team of officials of the Delhi Pollution Control Committee (DPCC), observed (January 2009) that the emission of gases from incinerator was not in accordance with the standards fixed by the DPCC. The DPCC also instructed (June 2010) the hospital not to operate the incinerator without its prior approval and observed that segregation of bio-medical waste was not proper as there was mixing of bio-medical waste with general waste and Effluent Treatment Plant (ETP) had not been provided for the treatment of waste water generated from the hospital. The DPCC instructed that sharp boxes should be provided for proper sharp waste storage and properly trained/qualified personal should be there for operation and maintenance of the incinerator.

The DPCC again inspected the hospital in February 2012 along with an expert from 'Centre for Occupational and Environmental Health' and observed that the segregation of bio-medical waste and labeling of bags was not proper, which may cause infection and injuries to the workers of BMWM by sharp objects. Thus, the **GTB** hospital failed to segregate the bio-medical waste and expenditure incurred on purchase of incinerator amounting to ₹ 42.98 lakh was, therefore, wasteful due to non-operation of the incinerator.

The hospital stated (December 2012) that bio-medical waste was being sent free of cost to M/s Synergy Waste Management Pvt. Ltd. with effect from May 2011 as per the directions of the Directorate of Health Services. The hospital has a Bio-Medical Waste Management Committee to supervise proper management of Bio-Medical Waste. Members of the committee take round of hospital premises regularly to ensure proper BMW Management.

The reply of hospital is not acceptable as it is silent about the observation of DPCC regarding segregation of bio-medical waste and labeling of bags.

3.2.16 Ambulance services

There was a fleet of four ambulances each in **GTB** hospital and **LN** hospital. A test check of records for the period 2009-12 revealed that ambulances remained unutilized most of the time. Hospitals have been using ambulances mainly for bringing medicines from the market, dropping doctors at their residences / hospital, carrying dead bodies to the mortuary and collecting cash from bank etc. instead of carrying the patients. Moreover, the ambulances were not equipped with basic life support equipment, such as, oxygen cylinders, suction pumps, BP instruments, stethoscopes, first aid boxes etc.

Ambulance not equipped with life supporting equipment in LN hospital (DL-1C-G1085)

In **GTB** hospital, only 284 patients were benefited during this period. Four ambulances ran only 2272 kilometers to shift patients to other hospitals in the year 2011-12. Similarly, in **LN** hospital, ambulances ran only 1324 kilometers for shifting patients during three years (**Annexure-3.7).** This showed that ambulances were used rarely. Thus, the expenditure incurred on purchase of ambulances, their maintenance and on salary of eight drivers in both the hospitals, was not utilized properly.

The **GTB** hospital stated that the essential equipment were being carried by the accompanying doctor, as and when, the patient was shifted for investigation/treatment to other hospitals. It was further mentioned that the ambulance is made available in various drills organized by the National Disaster Management Authority / the Delhi Disaster Management Authority also. One of the Advance Life Support ambulance received from CAT after CWG-2010, was stationed at the hospital which was used as and when its services were required. The **LN** hospital stated that one ambulance remained unutilized due to repair work while others were being used. The hospital was using these ambulances for patient care activities and not otherwise. The patient care activities also include sending the samples of the patient for swine flu testing etc. calling doctors from home in the night for the operations of the patients and carrying the dead bodies to the mortuary etc. The ambulances were parked in open space and as there was a possibility of theft, costly medical equipment were not kept in the ambulance. However, these equipment were available round the clock and kept with emergency/casualty staff.

The contentions of hospitals were not tenable as ambulances were scarcely used for the benefit of patients. Most of the time, ambulances were parked idle or used for the purposes other than transferring of patients.

3.2.17 Diet for patients

Diets are provided free of cost to the indoor patients in the hospitals. Some hospitals maintain their own kitchen and some outsource these facilities. Visit to hospitals revealed the following shortcomings:

3.2.17.1 Shortage of dietary staff

In **LN** hospital, there was shortage of one Chief Dietician, one Senior Dietician, seven Assistant Dieticians, and one Store Keeper. 69 posts of Head Cook, Cook, Bearer, Masalchi, Mates and five posts of Safai Karamchari were vacant.

The hospital stated that the matter regarding filling up the vacant posts had already been taken up with the Government.

3.2.17.2 Unhygienic conditions

The sanitation and hygienic conditions in kitchens of hospitals were poor. The food was being cooked in unhygienic conditions. Vegetables, both raw and cut, were stored in a shabby manner. The kitchens and the adjoining areas were badly lit. There was darkness in the kitchen area in **DDU** hospital. Food for 1400 to 1500 patients was cooked daily and served to them. It was seen that the staff were packing breakfast/lunch/dinner for the patients without wearing gloves. Cooked vegetables and cooked rice were kept in open vessels without lids (**LNH**).

The hospital stated that cooking staff and dieticians were overburdened due to shortage of staff. As far as the issue of hygiene is concerned, the shortage of Safai Karamcharis in the kitchen had been brought to the notice of higher authorities. The lighting and infrastructure in the department and up-gradation of the kitchen was being pursued with the PWD (**DDUH**). Serving was done only for new special ward patients with gloves worn by workers which were being procured in limited number since the opening of special wards. Cooked vegetables and rice were never kept in open vessels. Rice was always covered with white sheet once fully cooked (**LNH**).

Reply of the **LN** hospital is not tenable as audit had observed during field visit (October 2012) that kitchen staff were not wearing gloves. Vegetables and cooked rice were kept in open vessels.

3.2.17.3 Other shortcomings

Cooks and supporting staff were not in uniform, did not wear head covers, aprons and gloves (**DDUH**). The chimneys installed for the purpose of ventilation in kitchen, were not serving the purpose as chimneys and LPG ovens were at different locations in the kitchen. The facility of gas pipe line was also not functional and the cooking was done with gas cylinders. The grocery items like Atta, Rice, and Sugar etc. were being stored on the ground (**BSAH)**

Hospitals stated (December 2012) that all the employees were directed to wear neat and tidy uniform while on duty. However, on verification (February 2013), it was observed that the staff serving food was not wearing caps and gloves (DDUH). Sanction to PWD to renovate the kitchen and make it modular has been issued. The hospital had also issued a letter to the kitchen contractor for providing more racks for safe storage of ration immediately (**BSAH**).

3.2.18 Non-availability of essential drugs

As per the norms of the DHS, essential drugs and medicines for its hospitals should not normally be in a position of 'no stock'. Due to non-availability of essential drugs and medicines, patients are compelled to purchase the same from outside. Audit scrutiny revealed that in **BSAH**, 47 essential drugs as prescribed by the DHS were not available on many occasions during the period 2009-12. It was further revealed that four supply orders for 137 medicines and drugs (from November 2011 to August 2012) were placed with suppliers through CPA, but the suppliers did not supply the medicines as per order. The supply of 92 medicines was awaited as of November 2012.

The hospital stated (December 2012) that most of medicines and drugs are procured through CPA. In case of delay or non-supply of medicines and drugs by CPA, the hospital procures them through its own tenders. If medicines were essential for emergency patients, then medicines and drugs are procured through local purchase.

The reply of hospital is not acceptable as it does not address the issue of non-availability of medicines for OPD patients.

3.2.19 Non-functional equipment

- **Non-commissioning of C.T. Scanner -** In **GTB** hospital a supply order for one unit of High End 64 Slice CT Scanner was placed with M/s Siemens Ltd. at a cost of ₹ 7.17 crore in March 2010. The equipment was received in hospital in September 2010 (after 175 days of issue of A/T and after 108 days of opening of LC). The equipment procured on emergency basis, was to be installed by July 2010 as per the terms and

conditions of A/T. However, the CT Scan machine was installed in February 2012, after a delay of 20 months.

The hospital stated that the supply order of CT Scan was on turnkey basis and a separate building was to be constructed.

However, the reply does not address the issue that the proposal for equipment was moved on acute emergency basis and sanctioned by the competent authority.

- **Idle refrigerators –** In **BSA** hospital, five out of 12 refrigerators were not in use. The hospital stated that there were no medicines to be stored in these refrigerators, hence they were lying unused. This shows that refrigerators were procured in excess of actual requirement.
- **Idling of patient trolleys – In DDU** hospital, 10 two-part emergency patient trolleys with trolley for transfer of stretcher were purchased in October 2011 at ₹ 4 2.20 lakh on urgent basis. Five trolleys were issued in February 2012 to Forensic Medicine department and two to Medical Emergency in October 2012. Remaining three trolleys were lying idle (October 2012) in the main store. The hospital stated (February 2013) that out of three patient trolleys, one was issued to Operation Theatre. However the fact remains that two patient trolleys are still lying idle (February 2013).
- **Non-functional Digital X- Ray Machine –** The **DDU** hospital procured (March 2007) one Digital X-Ray machine at a cost of ₹ 1.22 crore which was installed in Casualty. The machine remained out of order since February 2010. In fact the machine has not been functioning properly since its installation and finally went out of order in February 2010. Audit observed that even after incurring an expenditure of ₹ 1.22 crore, patients were not getting services of the X-ray machine in the casualty and were being sent to other wings for X-Ray, causing delay in treatment.

  The hospital stated that the machine was installed in October 2008 and kept under trial for verification of all its features, consequently, the installation certificate was issued on October 2009. The machine went out of order in February 2010 which was partially repaired but went out of order again in March 2012. Due to continuous efforts of the hospital, the comprehensive warranty of machine was extended by two and half years up to April 2017 as penalty and non-comprehensive warranty was extended by five years up to April 2022 (**DDUH**). However, on verification in February 2013, it was found that the machine was still not working.
- **Non-functional medical equipment in different departments -** Scrutiny of records and information furnished by departments revealed that 53 medical equipment in 16 departments were not working

properly or lying idle for last two to three years. Out of these non-functional equipment, some were even under comprehensive maintenance contract. Thus, patients were not getting benefits from these equipment causing delay in treatment and inconvenience to them (**DDUH**). Similarly, 115 medical equipments were not working properly or lying unused (**BSAH**). The **DDU** hospital stated (February 2013) that every efforts would be made to make the equipment functional at earliest. The BSA hospital stated (February 2013) that repairing process of these equipment was under process (BSAH).

3.2.20 Other topics of interest

3.2.20.1 Non-functional fire safety system in G.B.Pant hospital

The Delhi Fire Service conducted (December 2011) an inspection under section 33(1) of Fire Preventive and Safety Measures Act and pointed out that access all around the building, was not available, fire check doors, compartmentation and smoke management system were not provided, fire extinguishers were provided but most of them were empty, internal and yard hydrants couplings and box hose reel nozzles were found missing. Pumps were under maintenance, exit signages were missing at many places, escape routes and stairs were found locked, keys for which were not available and there was no fire protection for the electrical panels.

The hospital stated (December 2012) that all the defects pointed by the Delhi Fire Service had been rectified and fire fighting systems were working. The request for NOC from the Delhi Fire Service had already been made which was awaited.

However, the required NOC from the Delhi Fire Service was not received as of February 2013.

3.2.20.2 Non-availability of ICUfacility

The **BJRM** hospital is a 100 bedded hospital and located in the slum area of the city. The patients with serious problems of Gynae, accident injuries and other ailments are admitted in the hospital but there is no ICU facility available. The hospital stated that four bedded ICU was going to function shortly after completion of renovation work. On verification in February 2013, it was seen that the renovation work had not been completed.

Conclusion

There were shortages in medical, para-medical and nursing staff in all the selected hospitals. Despite a continuous overall increase in patient load, no exercise had been carried out to fill in the critical vacancies and review the adequacy of the sanctioned strength. The casualty and emergency departments did not receive the necessary attention and priority in terms of

infrastructure, supplies of medicines and manpower. Consequently, these were not adequately equipped to ensure proper emergent medical aid to the patients. OPD services were affected due to shortage of medical equipment, medicines, injections, infrastructure and medical support items. Number of beds, necessary equipment, patient trolleys was not commensurate with overall increase in patient load in all the hospitals. Increase in patients load without corresponding increase in bed strength caused both stress and discomfort to the patients, besides exposing them to risk of infection. It was observed that the prescribed procurement procedures were not followed leading to adhocism in assessment of requirement, delay in both placing of orders and non-commissioning of equipment after their receipts. Although infrastructure had been created involving huge expenditure and their maintenance outsourced, the corridors, wards, passages, toilets and bathrooms were not maintained up to the mark.

Recommendations

- *The budgetary and expenditure controls in the hospitals need to be strengthened particularly in case of heads -'Machinery & Equipment' and 'Supplies & Materials'.*
- *The hospitals and departmental authorities may undertake a manpower review to assess the actual requirement of medical and technical staff commensurate with the increasing number of patients hospital-wise and initiate effective steps for filling critical vacancies.*
- *The Department may review the adequacy of infrastructure facilities across all hospitals to reduce the waiting time for patients for various investigations.*
- *Hospitals may ensure availability of essential drugs at all times. The system of procurement of equipment need to be streamlined to cut down delays.*
- *Ambulances in the hospitals may preferably be used only for patients' care and may also be kept fully equipped with essential basic life support system.*
- *The Department may take immediate action to ensure strict adherence to the Bio-Medical Waste (Management of Handling) Rules, 1998.*

Department of Women and Child Development

3.3 Implementation of Ladli Scheme

3.3.1 Introduction

The Government of National Capital Territory of Delhi (Government) had launched a scheme - 'Protection of Girl Child Scheme' in the year 2006, to enhance the social status of the girl child in the society, promote and ensure proper education and all round development to protect her from discrimination and deprivation. The scheme envisaged a deposit of one time lump sum amount of ₹ 5000 in the name of each girl child born in a government or local body hospital. The deposit along with accrued interest was to be redeemed to the girl child,who attended the school up toX^{th} class as a regular student and attained the age of 18 years.

In June 2007, the Government considered it appropriate to streamline and simplify the procedure, enhance the existing benefits and also make available a consolidated one window delivery system for the benefit of the girl child. Accordingly, the earlier scheme 'Protection of Girl Child' was modified with the approval of the Cabinet(October 2007) and a new scheme - 'Delhi Ladli Scheme' was launched with effect from 01 January 2008 and from the academic session 2008-09 (for girls born earlier to 01 January 2008), by the Department of Women and Child Development (the Department), of the Government. The children getting the benefit under the scheme 'Protection of Girl Child' had to be treated as part of this new scheme. The new scheme aims at enhancing the social status of girl child in the family as well as in the society as a whole by ensuring economic security and proper education to make her self-reliant.

The main features of the 'Delhi Ladli Scheme' are:

(i) The girls born on or after 01 January 2008, would get scheme benefits immediately after their birth and other benefits for education were to be implemented from the academic session 2008-2009 on their admission to the I^{st}, VI^{th}, IX^{th}, XII^{th} and on passing of X^{th} class in the government recognized schools in Delhi.

(ii) The Government will make periodic payments in the name of girl child, which would be kept as fixed deposits at her credit and redeemed along with accrued interest, after attaining the age of 18 years and passing X^{th}class as a regular student from a government recognized school or her taking admission in XII^{th}class.

(iii) Payment will be deposited at the following milestones:

- ₹ 11000, if the girl child is born in a hospital/nursing home/institutions in the NCT of Delhi, or
- ₹10000, if born at any other place,
- ₹ 5000,on admission of the child in class I,
- ₹ 5000, on admission of the child in class VI,
- ₹ 5000, on admission of the child in class IX,
- ₹ 5000, on the child's passing the class X, and
- ₹ 5000, on admission of the child in class XII.

(iv) Financial arrangements for the scheme have been made with the SBI Life Insurance Company Ltd. (SBIL) and the State Bank of India, providing the front services for accounting purposes.

(v) The eligibility criteria prescribed for the scheme are as follows:

- the applicant must be a bonafide resident of NCT of Delhi, for at least three years preceding the date of application,
- the girl child must have been born in Delhi as shown by the birth certificate, issued by the Registrar (Births and Deaths),
- the annual income of parents of the child should not exceed ₹ one lakh, and
- the financial assistance is restricted to two girls in a family.

Audit findings

Audit was conducted during August to October 2012 by selecting headquarters office, district offices and 30 schools (20 out of 398 schools for girls only, and 10 out of 184 co-educational schools were selected on random basis for conducting a survey) for the period 2008-09 to 2011-12, to assess the effectiveness of the implementation of the scheme. The deficiencies noticed in the implementation of the scheme are discussed below:

3.3.2 Financial management

Budget provision and actual expenditure for the scheme during the period

2008-09 to 2011-12 are given in **Table 3.11.**

Table 3.11: Budget provision and actual expenditure

(₹ in crore)

Sl. No.	Year	Budget provision	Actual expenditure	Saving(-) Excess(+)	No. of beneficiaries
1	2008-09	86.38	86.44	(+)0.06	129495
2	2009-10	87.00	86.97	(-)0.03	140006
3	2010-11	110.00	89.26	(-)20.74	105737
4	2011-12	93.00	92.90	(-)0.10	106585
	Total	**376.38**	**355.57**	**(-)20.81**	**481823**

(Source: departmental figures)

The above table shows that there was an abnormal increase in the budget provision as well as savings during the year 2010-11. The reasons for abnormal increase in budget provision and the consequential savings were called for, but were awaited as of February 2013.

3.3.3 Planning

The scheme was launched by the Department without having data of intended beneficiaries to be covered under the scheme and without fixing any annual target, financial or physical. Even the roles of stake holders *viz.* Department of Education, Department of Social Welfare and Department of Health were not spelt out clearly in the scheme notification or guidelines. Audit observed that the details of the modalities for the implementation of the scheme have not been spelt out.

3.3.4 Formulation of guidelines

The Department did not formulate any guidelines for hospitals and schools to register the girl child under the scheme on birth and renewals at subsequent stages, while she is admitted for studying.

3.3.5 Selection of Bank/Financial Institution for managing the scheme fund

Audit scrutiny revealed that SBIL made a presentation to the Department in December 2007 (before the notification and launching of the scheme) on investment of scheme funds and expressed their views on modalities of implementation, projected rate of interest, maturity value, service charges etc. The Department again held a meeting with representatives of other

five Scheduled Banks[**] (January 2008), who presented their views on same aspects of the scheme, as were discussed with SBIL earlier. In the meeting (January 2008), the rate of interest offered by these banks ranged from 8 *per cent* (Bank of Baroda) to 9 *per cent* (Syndicate Bank and Union Bank of India). As per the minutes of this meeting with scheduled banks, the presentation made by SBIL (December 2007), was also discussed in the meeting, wherein it was mentioned that SBIL offered a fund management solution in which the tentative maturity amount, against the deposit of ₹ 30,000, would work out to ₹ 84,552 at the interest rate of 10.5 *per cent* and redeemed to girl child after she attained the age of 18 years.

However, in the note submitted to the Cabinet for approval of the financial arrangement for implementation of the scheme, the Department mentioned that there was general consensus among the officers present[††] in the meetings, that a combination of banking institution and insurance company like that of State Bank of India and SBIL would be ideal for the successful implementation of the scheme. It was also mentioned that (i) banks cannot have a lock-in-period of more than 10 years for deposits, as a result, they cannot receive fixed term deposits for a period of 18 years, (ii) an insurance company is not restricted by such condition, and (iii) a comparison of rates of interest offered by all banks and SBIL, given in the Note, showed rate of interest offered by SBIL as 10.50 *per cent,* which was the maximum. The Cabinet, on the recommendation of the Department, approved (February 2008) that funds of the 'Ladli Scheme' be invested with the SBIL. However, the Cabinet decision did not mention the rate of interest for investment of 'Ladli Funds'.

Audit observed following shortcomings in the decision of selection of SBIL:

- On this proposed Cabinet Note, the Finance Department observed that it was not advisable to resort to fund management approach, which might give higher returns but would involve risk of fluctuations of market, therefore, option of fixed deposits may be preferred, because they are bound to give contracted rate of interest on fixed deposits. Furthermore, the scheme would be simple, more transparent and easy to administer for the Department as well as the beneficiaries. The Law Department also endorsed the opinion of the Finance Department. However, audit observed that the Department

[**] Bank of Baroda, Corporation Bank, State Bank of India, Syndicate Bank and Union Bank of India

[††] Chief Secretary, Pr. Secretary (H & F W), Pr. Secretary (Finance), Secretary (Education), Director (Social Welfare), Director (Planning), Dy. Director (Education) and other officers

did not consider the observations/suggestions of the Finance Department and the Law Department.

- SBIL did not make any assurance of 10.50 *per cent* rate of interest, which it clarified in February 2011, saying that achieving 10.50 *per cent* interest per annum was extremely difficult in long run i.e. 20 years. The rate of interest was not mentioned in MoU, signed between the Department and SBIL.
- The Department had not explored other insurance companies like LIC, to earn the maximum return on investments. As a consequence of the Cabinet decision for opting the SBIL, beneficiaries had suffered a loss of interest @ 1 *per cent* to 2.5 *per cent*.

3.3.6 Financial returns not accrued as envisaged in the scheme

The Cabinet Note for the approval of the scheme projected annual interest rate of 10.5 *per cent* on investments. However, Audit observed that SBIL gave only 6.5 and 7 *per cent* interest rate for the years 2008-09 and 2009-10 respectively. A Committee of Group of Ministers discussed the matter and decided (May 2011) that the Department should take up the issue of low return on investments, with SBIL and should also invite proposal from Nationalized Banks for a guaranteed rate of interest. However, the decision to select the Nationalized Bank had not been taken as of October 2012.

The Government contributes ₹11000 or ₹10000 at initial stage and ₹ 5000 at subsequent milestones, whereas SBIL credits the amount in accounts of beneficiaries after deducting a premium for insured amount @ ₹ 0.65 to ₹ 2.10 for different age groups and the service charges applicable from time to time. However, there is no benefit to the girl child against the deduction of premium from the contribution as the assured amount would go to the Government in the event of death of beneficiary. Audit observed that payment of compensation to the girl child for any disability due to accident or otherwise has not been taken into account while selecting SBIL for making investment.

3.3.7 Renewal of cases

The scheme envisages that the beneficiaries should get their policy renewed at every milestone after registration at birth level. In case renewal is not done at any of the milestones, the girl child would be out of the scheme, without any monetary benefit.

Audit scrutiny of renewal cases for the period 2010-11 to 2011-12, revealed that out of 125808 cases due for renewal, only 73108 (58.11

per cent) were renewed (as of October 2012) as given in **Table 3.12.**

Table 3.12: Renewal of beneficiaries

Sl. No.	Year	Cases due for renewal	Cases renewed	Shortfall	Percentage
1	2010-11	45307	20140	25167	55.55
2	2011-12	80501	52968	27533	34.20
Total		**125808**	**73108**	**52700**	**41.89**

The above figures indicate that at the end of 2011-12, 42 *per cent* of beneficiaries have gone out of the scheme due to non-renewal of their cases at some stage and the amount due at that stage was not available to them, resulting in monetary loss to the girl child.

The beneficiary being a child cannot understand the procedure of renewal and even their parents are not so educated. Hence, the responsibility rests with the teacher or the Department, for renewal of the scheme at different milestones, for the success of the scheme. The Department failed to monitor the renewal at different stages in an effective manner.

3.3.8 Delay in finalisation of maturity claims

Audit observed that the Department took undue time to disburse the maturity claim to the beneficiaries. Audit analysis revealed that 51835 cases matured during 2009-12, whereas only 29800 (57 *per cent*) were finalized, as given in **Table 3.13.**

Table 3.13: Maturity cases finalised

Sl.No.	Year	Cases due for maturity	Cases finalized and sent to SBIL	Shortfall	Percentage of cases finalized
1.	2009-10	6908	1065	5843	15.42
2.	2010-11	18535	16378	2157	88.36
3.	2011-12	26392	12357	14035	46.82
Total		**51835**	**29800**	**22035**	**57.49**

It is evident from the above figures that the Department finalized only 15 to 88 *per cent* of cases, which matured during 2009-10 to 2011-12. In all, 43 *per cent* of cases were not finalized during the last three years. This was mainly due to the Department's failure in reconciling the data with SBIL and tracing the remaining beneficiaries. As a result, the maturity amount in

respect of untraced beneficiaries was lying unclaimed with SBIL. The Department was not even aware of the quantum of amount lying with SBIL. Thus, 43 *per cent* of the beneficiaries who were registered under the scheme since April 2008 were deprived of the benefits.

3.3.9 Management of advertisement and publicity

The Department incurred an expenditure of ₹ 27.02 crore on advertisements and publicity of the scheme during the period 2008-09 to 2011-12, as given in **Table 3.14.**

Table 3.14:Expenditure on advertisements

(₹ in crore)

Year	Total expenditure	Expenditure on advertisements	Expenditure on advertisements (in *per cent*)	Change in expenditure on advertisements (in *per cent*)	Beneficiaries	Change *(in per cent)*
2008-09	86.44	3.83	4.43	-	129495	
2009-10	86.97	2.40	2.75	(-)37.33	140006	8.12
2010-11	89.26	5.94	6.66	147.50	105737	(-)24.48
2011-12	92.90	14.85	15.98	150.00	106585	0.80
Total	**355.57**	**27.02**	**7.60**		**481823**	

(Source: departmental figures)

Audit analysis revealed that during 2009-10, the expenditure on advertisement decreased by 37.33 *per cent,* whereas the number of beneficiaries increased by 8.12 *per cent.* On the other hand, during 2010-11, it increased by 147.50 *per cent* whereas the number of beneficiaries decreased by 24.48 *per cent.* In 2011-12, expenditure on advertisement further increased by 150 *per cent* but beneficiaries increased by only 0.80 *per cent*. This indicated that the expenditure on advertisement neither had any correlation with the number of beneficiaries, nor had resulted in expected increase in the number of beneficiaries.

This was further corroborated by the outcome of a survey conducted by Audit in 30 schools, where only 13 out of 518 girls students (2.51 *per cent*), stated that they came to know about the scheme, through advertisements.

3.3.10 Publicity through 'Smile Cards Campaign'

To create awareness among the intended beneficiaries and to popularize the scheme, on the recommendation of the Bhagidari Cell of Government of NCT of Delhi, the Department launched a 'Smile Cards' campaign. In this, a person is randomly selected and photographed and his photo is pasted on the envelope with the signature of the Hon'ble Chief Minister,

Government of NCT of Delhi. The envelope is then posted at the address of selected person with a request to help the eligible girl child in registering at the nearest Anganwadi Centre. With a view to getting a report about the utility and for further expansion of the publicity campaign, the Department placed an order (January 2008) with a firm for printing of 10000 'Smile Cards' for the publicity of 'Ladli Scheme', on single tender basis, one month prior to the notification (February 2008) of the scheme. However, even before assessing the outcome of the campaign, the number of cards was increased to 36963.Thus, the Department incurred an expenditure of ₹ 22.43 lakh on printing of these 'Smile Cards' without following any codal provision of the General Financial Rules.

The Department stated (September 2012) that job order for printing of 10000 'Smile Cards', was awarded to the firm, but subsequent to low registration of girls under the scheme, it was decided by the Bhagidari Cell to dispatch more such cards. It was also stated that it being a new scheme and due to shortage of staff, feedback could not be collected.

The reply is not appropriate as the number of Smile Cards was increased without assessing the usefulness of the campaign. The Department's plea of shortage of staff to get a feedback or utility report on the campaign is also not appropriate as it was known to the Department at the time of launching of the campaign.

3.3.11 Survey of beneficiaries by Audit

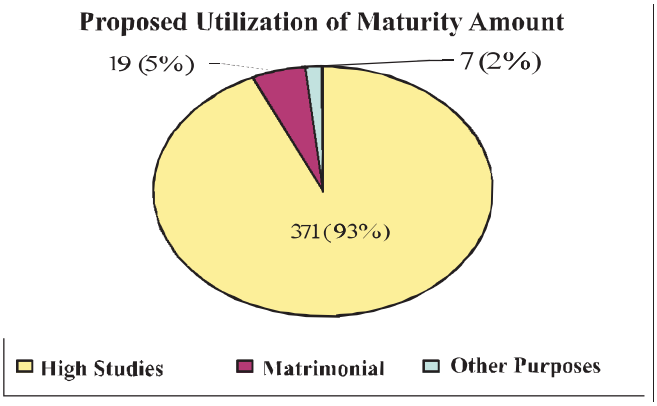
A survey was conducted by Audit to find out the status of registration and renewal of girl child/beneficiary and to know the opinion of teachers and students about the scheme. Out of total 968 schools, there are 398 schools for girls only, 184 co-educational schools and the remaining, boys' schools. Out of 398 schools for girls only, 20 schools and out of 184 co-educational schools, 10 schools were selected on random basis for survey. The year-wise total number of girl students, beneficiaries under the scheme and their renewal at prescribed stages are given in **Table 3.15.**

Table 3.15: Survey by Audit

Year	Total No. of girls students	Beneficiaries under the scheme	Percentage of beneficiaries	Renewal cases due	Cases actually renewed	Percentage of renewal cases
2008-09	14798	3765	25.44	-	-	-
2009-10	17062	4635	27.17	-	-	-
2010-11	19535	4087	20.92	3674	1322	35.98
2011-12	20796	3806	18.30.	5721	2616	45.73
Total	**72191**	**16293**	**22.57**	**9395**	**3938**	**41.92**

The analysis of data shows that number of beneficiaries declined from 27.17 *per cent* in 2009-10 to 20.92 *per cent*in2010-11 and further to 18.30 *per cent* in 2011-12. It further revealed that only 41.92 *per cent* of cases were renewed during 2010-11 and 2011-12. Therefore, 58.08 *per cent* girls were out of the scheme due to non-renewal of their cases.

Survey in 30 schools also revealed that there were 12511[‡‡] girl students studying in classes IXth to XIIth. Out of these 2655 (21 *per cent*) were beneficiaries. The survey covered 397 (15 *per cent*), out of 2655 beneficiaries to ascertain about intention of beneficiaries as regard to utilisation of maturity amount. The outcome of survey is given below in the pie chart:



The above chart shows that 93 *per cent* beneficiaries were interested in higher studies, which was a healthy trend. Whereas, five *per cent* beneficiaries were interested to utilise the maturity amount for the marriage purpose and only two *per cent* intended to utilise the money for other purposes such as, helping parents, purchase of durable assets etc.

Survey also revealed that the teachers suggested for relaxation of the eligibility conditions of the scheme, e.g., parent income, birth certificate and the proof of the residence, in case the girl is studying in a school for last three years.

During the survey, teachers and beneficiaries expressed that eligibility criteria for the scheme are stringent and the renewal procedure cumbersome, which need to be relaxed and simplified, so that more girls may join the scheme.

[‡‡] Average of last four years i.e. 2008-09 to 2011-12

3.3.12 Monitoring mechanism

In order to ensure the effective implementation of the scheme, it was necessary to have an effective monitoring mechanism at every stage. However, monitoring mechanism of the 'Ladli Scheme' had the following deficiencies:

(i) a well defined monitoring structure was not framed for the implementation of the scheme, (ii) a mechanism to get feedback from the beneficiaries was not evolved, (iii) validation of data of the scheme was not done, (iv) no system was in place to verify the amount at maturity or renewal stage,(v) the only source of data is SBIL, and (vi) the shortcomings, pointed out **(Annexure 3.8)** by the consultant engaged by the Government in 2009 for the evaluation of the scheme, were not removed.

Conclusion

The Department had neither details of beneficiaries to be covered nor the financial mechanism to ensure availability of expected amount of ₹ one lakh, at maturity of the policy. The financial arrangement with SBIL was not yielding the expected returns on investments. The payment of compensation to the girl child for any disability due to accident or otherwise has not been taken into account while selecting SBIL for making investment. Guidelines were not formulated for implementation of the scheme, to help the hospitals and schools in registering and renewal of beneficiaries at birth and different levels of school. The monitoring mechanism was ineffective as finalization of renewal and matured cases were not prompt. 22035 matured cases could not be finalized due to non-reconciliation of data or beneficiaries being untraceable. The Department was not aware about the amount at the credit of untraced beneficiaries, which was lying with SBIL. The stipulated evaluation of the scheme was not being done every two years.

Recommendations

The Government may consider to:

- *have a proper monitoring mechanism along with a set of guidelines to ensure registration and renewal of the beneficiaries in time and periodical evaluation of the scheme,*
- *take necessary steps to develop better co-ordination among various Departments i.e. Health, Education, MCD and NDMC for smooth implementation of the scheme, and*
- *review its plan of investment to get maximum rate of interest and maturity value after 18 years.*

3.4 Audit of Delhi Building and Other Construction Workers Welfare Board

Executive Summary

A thematic audit of the Delhi Building and Other Construction Workers Welfare Board was conducted to evaluate the functional efficiency of the Board in providing welfare measures to the building and other construction workers in Delhi.

The Board has not mapped all the construction workers in Delhi, as only 87273 construction workers have been registered up to 31 March 2012, against census figure of 2001 at 352830, the strength of workers. Out of fifteen welfare schemes prescribed under the Act, benefits of only seven schemes were availed by members, indicating lack of spread of awareness.

The Board incurred administrative expenditure in excess of prescribed limit of five *per cent* of total expenditure, in six financial years. ₹ 13 .20 crore and ₹ 4 .24 crore were released in lump sum to the Directorate of Education and the Directorate of Health Services respectively, out of which ₹ 6.99 crore is lying unutilised. The decision of the Government to set up 25 *Chalta - Firta* Schools at construction sites for the children of construction workers, was not implemented even after release of ₹ 7 .50 crore by the Board to the Universal Elementary Education Mission depriving children of education and interest loss of ₹ 1 .75 crore. Imprudent financial decisions resulted in further loss of interest amounting to ₹ 4.24 crore.

The Board has no mechanism in place to assess and monitor the collection of cess from the local bodies like MCD, DDA etc. In two cases, MCD did not credit, ₹ 2.66 crore and ₹ 1.46 crore collected by it as cess, in Board's Account.

The Board spent ₹ 0.98 crore on publicity campaign of Rashtriya Swasthya Bima Yojana, though the responsibility for publicity rested with the insurance company as per the scheme's parameters.

The functioning of the Board was suffering due to lack of adequate man power and provisions of the Act governing budget, annual report, registration of workers, meetings of the Board, submission of Accounts to the C&AG of India etc. were not being adhered to or complied with.

3.4.1 Introduction

With a view to providing and monitoring social security schemes and welfare measures for the benefit of the building and other construction workers, the Central Government considered it necessary to constitute Welfare Boards in every State. It was also considered necessary to levy a cess on the cost of construction of the buildings and other construction works for ensuring sufficient funds for the Boards. With this vision, the Central Government enacted the Building and other construction workers (Regulation of Employment and Conditions of Service) Act, 1996 (the Act) and notified on 14 July 2000. Accordingly, the Delhi Government framed (January 2002) 'the Delhi building and other construction workers (Regulation of Employment and Condition of Service) Rules, 2002 under the Act. The Lieutenant Governor, National Capital Territory of Delhi constituted the Delhi Building and Other Construction Workers' Welfare Board (the Board) on 2 September 2002.

3.4.1.1 Organizational set up

The Board is headed by a Chairman who is assisted by the Secretary, an Additional Labour Commissioner and a Joint Labour Commissioner. The Joint Labour Commissioner is assisted by two Assistant Labour Commissioners and one Accounts Officer. There are nine Deputy Labour Commissioners, notified as cess assessing officers, each heading a district office. An organizational chart of the Board is given in **Annexure-3.9**.

3.4.2 Audit scope and methodology

The thematic audit covers the period 2002-03 to 2011-12 with specific focus on extending the benefits available under welfare schemes to the registered building and construction workers by the Board. The audit was conducted at Board's headquarters and five selected districts[§§]. Audit memos were issued for collection of information and audit findings were communicated to the Board and its district offices for confirmation of audit observations and comments of the audited entity.

3.4.3 Audit objectives

The broad objectives of the audit were to assess whether:

- the Board had effectively and efficiently exercised its powers to discharge its functions and duties according to the Act and Rules made there under,
- planning, implementation and management of schemes were effective to achieve the targets, and

[§§](i) East, (ii) North, (iii) North West, (iv) South, and (v) South West

- the fund management was effective, efficient and economical.

3.4.4 Audit criteria

The performance of the Board was benchmarked against criteria derived from the following sources:

- The Delhi Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996,
- The Delhi Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2002,
- The General Financial Rules, and
- Relevant orders and notifications issued by the Government and the Board.

Audit findings

3.4.5 Registration of construction workers

Section 11 of the Act stipulates that every building worker registered as a beneficiary under the Act, shall be entitled to benefits provided by the Board from its fund. In order to ensure availability of various benefits to all the construction workers, it is imperative that the Board possess accurate and reliable information with regard to the number of construction workers in Delhi and ensure registration of all the genuine construction workers with it. As per census 2001, there were 352830 construction workers in Delhi whereas the numbers of registered construction workers were 87273 (cumulative) as on 31 March 2012. Year wise details of registration is given in **Table3.16.**

Table 3.16: Year wise details of registered construction workers

Sl. No.	Year	No. of workers registered during the year	Cumulative figure
1	Upto 31.03.2007	1558	1558
2	2007-08	5831	7389
3	2008-09	10433	17822
4	2009-10	7860	25682
5	2010-11	24860	50542
6	2011-12	36731	87273

Source: data supplied by the Board

It is evident from the table above that the Board had a cumulative figure of 87273 members as on 31 March 2012 which includes 36731 members

registered during 2011-12. As per information provided by the Board, there were only 41910 live members with it, as on 31 March 2012. Live members are the members registered during the current year along with the previous members, who got their registration renewed during the year. Audit analysis revealed that only a nominal fraction of previously registered workers renewed their registration under the scheme.

The Board has not evolved any mechanism for mapping the construction workers and did not have complete data base of construction workers in Delhi.

In its reply, the Board attributed the reasons for lesser number of renewals to the migratory nature of the construction workers. The Board's contention is not acceptable as it did not provide relevant data to support its contention. The records made available to Audit, did not show adequate efforts made by the Board to get workers' memberships renewed.

3.4.5.1 Deficiencies in registration of construction workers

Registration of construction workers is the most important function of the Board and as such, it should be very careful and vigilant while registering the construction workers as beneficiaries of the fund, because all benefits are provided to beneficiary only after due verification of the claim filed. Rule 266 specifies following conditions for the building and other construction workers to be registered as beneficiary of the fund:

(i) age should be between 18 and 60 years with proof as required under the Rules,

(ii) should not be a member of any other welfare fund under any law in force, and

(iii) should have completed 90 days of service as a building worker in the year immediately preceding, as certified by the employer or contractor, Workers Union or Assistant Labour Commissioner of the concerned area.

However, test check of 938 applications for registration of construction workers at selected District Offices, revealed following deficiencies in registration of construction workers:

- 472 applications did not have date on which application was submitted in the district offices,
- 683 applications did not have date of certification by the employer that the applicant was a construction worker, and
- 196 construction workers had not completed the required period of 90 days of service as a building worker in the year preceding the year of registration as required under the Act.

In its reply, the Board accepted (March 2013) audit observation regarding deficiencies in applications, such as absence of date of registration and certification by the employer. As regards response of the Board that there was no such case of registration of worker without completing 90 days of work, the reply is factually incorrect as the Audit observation is based on records provided by the Board.

3.4.5.2 Delay in issue of identity cards

As per Rule 266 and an advisory issued by the Board, Identity Cards to the construction workers should be issued within a period of 30 days of receipt of application as a confirmation of his/her becoming a member of the fund.

However, Audit observed in selected districts, that in a number of cases, identity cards were issued with considerable delays. The district wise status of delay in test checked cases is given in **Table 3.17.**

Table 3.17: Delay in issue of identity cards

Sl. No.	Name of the District	No. of applications checked	Delay in issue
1	East	1249	1 to18 months
2	North	1342	1week to 2 months
3	North West	1427	1 to 9 months
4	South	1110	1 to11 months

Note: South West district did not provide records

Thus, identity cards were not issued within the prescribed time frame which deprived the construction workers of due benefits to the extent of delay.

In its reply, the board stated (March 2013) that prior to March 2011 no such time limit was prescribed. The Identity Cards/ Pass books have now been issued within 30 days. The Board's contention is not acceptable as there were delays in issuance of Identity Cards/ Pass books even after March 2011.

3.4.5.3 Implementation of welfare schemes

(a) Expenditure on welfare schemes

In terms of provisions of Section 24 of the Act, administrative expenses of the Board should not exceed five *per cent* of its total expenditure in a financial year. However, audit analysis revealed that utilisation of funds by the Board on administrative activities was not in compliance with the prescribed provisions. Since its inception in September 2002 to March 2012, the Board received ₹ 923.04 crore as cess and incurred a total expenditure of ₹ 29.99 crore during the same period. The expenditure included expenditure of ₹ 2.38 crore (7.94 *per cent*) on administration and

₹ 27.61 crore (92.06 *per cent)* on welfare of construction workers. Year wise details of expenditure up to 31 March 2012 are given in **Table 3.18.**

Table 3.18: Year wise details of expenditure incurred by the Board

(₹ in lakh)

Year	Total expenditure	Expenditure on administration	Expenditure on welfare activities	Percentage expenditure on administration	Percentage expenditure on welfare activities
2002-03	-nil-	-nil-	-nil-	-nil-	-nil-
2003-04	0.58	0.09	0.49	16	84
2004-05	-nil-	-nil-	-nil-	-nil-	-nil-
2005-06	3.40	0.37	3.03	11	89
2006-07	0.73	0.27	0.46	37	63
2007-08	15.88	0.68	15.19	04	96
2008-09	50.21	5.63	44.58	11	89
2009-10	2572.37	21.26	2551.11	01	99
2010-11	90.36	63.49	26.87	70	30
2011-12	265.02	145.84	119.17	55	45
Total	**2998.55**	**237.63**	**2760.91**	**-**	**-**

The above table indicates that the Board did not adhere to the prescribed provision as expenditure on administration was more than five *per cent* of the total expenditure in six out of 10 financial years. The expenditure on administration in these six years ranged from 11 to 70 *per cent.* It was also observed that there was abnormal increase in the expenditure on welfare activities during 2009-10. This was due to lump sum release of ₹ 20.72 crore and ₹ 4.24 crore by the Board to the Directorate of Education (DoE) and Directorate of Health Services (DHS) respectively and the amount had been incorrectly booked as expenditure on welfare expenditure. The irregularities noticed in release of funds by the Board are discussed in the subsequent sub-paragraph.

In reply, the Board accepted the audit observation for 2010-11 and 2011-12. For previous years, it stated that excess expenditure on administrative activities was due to expenditure on office equipment, publicity, providing furniture and other office equipment etc. The reply is not tenable as the expenditure in excess of prescribed limit was in violation of provisions of the Act.

3.4.5.4 Release of grant to Government agencies/ NGOs

Section 22 (3) of the Act stipulates that the Board may pay annually grant-in-aid to a local authority who provides to the satisfaction of the Board,

welfare measures and facilities of the standard specified by the Board for the benefits of the building and other construction workers and their families.

(a) Release of ₹ 4.24 crore as grant to DHS

To provide the medical facilities at construction sites to the construction workers and their families who often get injured and are in need of on the spot medical care, the Board released ₹ 4.24 crore as grant (July 2009) to the DHS under the Mobile Health Scheme. Audit observed that the Board did not finalise the terms and conditions of utilisation of grants by the DHS. Moreover, the Board neither ensured nor conducted supervision and monitoring of the scheme. As per utilisation certificate submitted by the DHS, only ₹ 0.99 crore were utilised till March 2011. Thus, releasing grant in lump sum, instead of annually, resulted in ₹ 3.25 crore lying unutilised with the DHS.

In its reply, the Board stated that the amount was released as advance and not as grant. It further stated that the DHS was requested to implement the scheme effectively. The reply is not acceptable as under the Act, the Board can release only grant, loan or subsidy to local bodies or employers for welfare of construction workers. Further, the Board had incurred this amount as expenditure in Accounts.

3.4.5.5 Non -release of ₹ 1.10 crore to Delhi Arogya Nidhi

The section 22 (f) of the Act provides that the Board may meet medical expenses for treatment of major ailments of a beneficiary or such dependent, as may be prescribed. In view of this provision, the Board approved (May 2009) provision of medical facility for major ailments of the beneficiaries and considered collaboration with the Delhi Arogya Nidhi, an organization of the DHS. Audit observed that the Board issued (June 2009) a cheque of ₹ 1.10 crore (₹ 1.00 crore for medical facilities plus 10 *per cent* as administrative cost) to the DHS for treatment of major ailments of beneficiaries. But the scheme was not started by the Delhi Arogya Nidhi. The Audit noticed that the cheque was returned to the Board by the DHS as it was not issued in favour of the Delhi Arogya Nidhi and thereafter, no amount was released on this account.

Thus, the Board failed to implement its own decision to provide medical facility for treatment of major ailments of the beneficiaries.

The Board in its reply admitted the fact and stated that it had not made any payment to the Delhi Arogya Nidhi as the scheme was shelved by the Board since construction workers and their family members were covered under Rashtriya Swasthya Bima Yojana (RSBY) scheme. Board's reply is not tenable as the benefit of RSBY scheme was already available since

2008. Moreover, the new scheme was envisioned to provide medical facilities for major ailments which were not covered under RSBY.

3.4.5.6 Release of grant to Universal Elementary Education Mission (UEEM) and loss of interest of ₹ 1.75 crore

The Board released (July 2009) an amount of ₹ 7.50 crore as grant to the UEEM for setting up of 25 *Chalta – Firta* Schools for educating the children of the building and other construction workers at site. Audit observed that the UEEM has not started the project even after a lapse of more than three years. This has not only deprived the beneficiary children of intended education but also grant of ₹ 7.50 crore remained blocked with UEEM. The Board neither pursued the UEEM to start the project nor made efforts to recover the amount. This has resulted in loss of interest of ₹ 1.75 crore[***].

The Board accepted the audit observation and stated (March 2013) that the matter was being taken up with the Directorate of Education.

3.4.5.7 Release of ₹ 13.20 crore as grant to DoE

As per decision taken in a meeting held on 23 May 2009 under the Chairmanship of the Chief Minister, the Board released ₹ 13.20 crore (including 10 *per cent* administrative expenditure) in June 2009 to the DoE for providing financial incentive to approximately one lakh children of building and other construction workers.

Audit observed that the grant was released to DoE without considering the modalities of payment to children, mode of transfer of benefit etc. As per information provided by the Board, the DoE disbursed ₹ 9.46 crore to only 37391 children up to March 2012 as detailed in **Table 3.19.**

Table 3.19: Disbursement of financial incentive to the children of workers

(₹ in crore)

Sl. No.	Year	No. of children	Amount disbursed	Balance
1	2009-2010	10916	2.49	10.71
2	2010-2011	10300	2.54	8.17
3	2011-2012	16175	4.43	3.74
Total		**37391**	**9.46**	**3.74**

The Audit analysis revealed that 63 *per cent* of targeted children were left out of the scheme's benefits even after a lapse of 33 months (March 2012). The release of grant of ₹ 13.20 crore in lump sum instead of annually, was also in violation of Section 22(3) of the Act. Terms and conditions governing the utilisation of the grant to the DoE were also not framed.

[***] The interest loss of ₹ 1.75 crore has been calculated on ₹ 7.50 crore for three years at SBI's domestic interest rate of 7.25 per cent per annum.

Moreover, the Board did not have the data regarding beneficiary students' name, registration number of their parents and date of registration with the Board. In the absence of such vital data, the disbursement of ₹ 9.46 crore as financial incentives to the children of workers could not be vouched safe in audit.

The Board, in its reply, stated (March 2013) that amount released to the DoE was not a grant and details of data regarding beneficiaries were already sent to the DoE. The reply is not acceptable as funds were released in lump sum instead of annually. However, the Board did not provide the data regarding beneficiary student's name, registration number of their parents and date of registration etc. to Audit.

3.4.5.8 Non-receipt of benefits under Jan Shree BimaYojana (JSBY)

Under Section 22(d) of Act, the Board may pay the prescribed amount in connection with premium for Group Insurance Scheme of the beneficiaries. The Board opted for JSBY of the Life Insurance Corporation of India (LIC) during 2007-08 to motivate the construction workers to become beneficiary of the Fund and decided to cover all registered construction workers. Nine term insurance policies (yearly renewable) were finalised by the Board from November 2009 to March 2010 covering the period from 01 December 2007 to 30 June 2010 and ₹ 15.92 lakh was paid as premium on these policies. These polices could not be renewed as the Board did not furnish the data of the JSBY beneficiaries to LIC.

Further, under Shiksha Sahyog Yojna part of JSBY, a scholarship of ₹ 300 per quarter per child (maximum up to two children per family) was payable by the LIC to the children of the JSBY beneficiaries studying in classes IX to XII for a maximum period of four years. Audit observed that only one beneficiary could get the benefit under the scheme/policy, out of four applicants who had applied for it. The reason being that the required data of the three applicants could not be forwarded to LIC by the Board due to non-receipt of data from respective District Offices.

Therefore, as the Board failed to maintain and furnish the required data to LIC, benefits were not available to beneficiaries despite the payment of premium of ₹ 15.92 lakh. This resulted in depriving children of workers of benefits under JSBY, thereby defeating the very purpose of providing social security to the registered construction workers.

The Board accepted the audit finding and stated (March 2013) that matter had been taken with LIC to release the due payment to remaining three claimants.

3.4.5.9 Avoidable expenditure of ₹ 0.98 crore on publicity

The Rashtriya Swasthya Bima Yojana (RSBY) of GoI was started in NCT of Delhi in 2008-09 for providing health cover to all BPL families through Oriental Insurance Company Ltd (OICL). Subsequently, the GoI decided (September 2008) to include the registered construction workers also in the RSBY. As per the Cabinet decision of March 2009 and scheme's parameters, the responsibility for publicity of the scheme, rested with the Insurance Company. However, Audit observed that the Board incurred an expenditure of ₹ 0.98 crore on publicity of RSBY, as discussed below:

(i) The Board incurred an expenditure of ₹ 0.76 crore on publicity for creating awareness about the RSBY scheme, among the registered workers through radio jingles for 30 days w.e.f 23 December 2010.

(ii) The Board released an amount of ₹ 8.25 lakh (October 2010) to the Mission Convergence for undertaking publicity-cum-media campaign for RSBY. An amount of ₹ two lakh (March 2012) was further released to the Mission Convergence despite the fact that utilisation certificate of previous grant was pending.

(iii) The Labour Department of the Government of NCT of Delhi released advertisements for the publicity of RSBY scheme in 10 newspapers on 6 December 2010 and the expenditure of ₹ 12.10 lakh was borne by the Board on these advertisements.

Thus, the Board incurred an avoidable expenditure of ₹ 0.98 crore on publicity of RSBY which should have been borne by the OICL as per the scheme's parameters.

In its reply, the Board stated (March 2013) that the RSBY was a National Scheme which was extended to registered construction worker of Delhi in 2008 and 100 *per cent* premium of the scheme was to be borne by the Board from cess fund. Therefore, publicity regarding RSBY scheme was to be undertaken by the Board from cess fund.

The Board's reply is not acceptable as the responsibility for publicity of the scheme, was of the OICL in terms of Cabinet decision of March 2009 and the parameters of scheme.

3.4.5.10 Benefits extended under welfare schemes

The Board was constituted in September 2002 for providing and monitoring the benefits under various welfare schemes to the construction workers. The status of benefits extended to the workers up to February

2013 since inception of the Board, is given in **Table 3.20.**

Table 3.20: Status of benefits provided to beneficiaries by the Board

Sl. No.	Name of scheme	Period	No. of applications received	Rejected	Finalised	Pending (as of 25 Feb. 2013)
1.	Medical assistance to workers	2007-12	8	2	5	1
2.	Maternity benefits	2009-12	6	-	4	2
3.	Funeral assistance	2011-12	4	-	3	1
4.	Financial assistance for education	2009-12	164	4	126	34
5	Death benefits to nominee	2007-12	27	2	22	3
6.	Marriage benefits	2007-12	4	4	-	-
7.	Pension benefits	2010-12	11	-	7	4
Total			**224**	**12**	**167**	**45**

The table above is indicative of the fact that only few applications were received by the Board from the registered members seeking benefits during the period up to February 2013. Audit observed that there were 15 welfare schemes prescribed under the Act, however, benefits were availed by members under only seven schemes during entire period up to 31 March 2012. Thus, it is imperative on the part of the Board to familiarize the construction workers about their rights to benefits being provided by the Government to enable them to avail the same.

In its reply, the Board stated (March 2013) that efforts had been made from time to time for creating awareness regarding welfare scheme through pamphlets, banners, advertisement in news paper and broadcasting of jingles on FM Radio. However, it was up to the workers to apply for claiming benefits and various schemes.

The reply is not tenable as it is the responsibility of the Board to cover all workers and spread the awareness about the scheme.

3.4.6 Expenditure of ₹ 0.49 crore on non-mandated activities

Scrutiny of the records revealed that the Board had incurred an expenditure of ₹ 0.49 crore on activities which are not covered under the Act. Such cases are discussed in subsequent paragraphs.

3.4.6.1 Development of temporary accommodation for construction workers

The scheme for 'Developing Holding Areas' in NCT of Delhi for providing temporary accommodation for construction workers was

envisaged by the department of labour in 2008 and four sites were also identified for the scheme. The Board paid ₹ 35.96 lakh (June 2009) to M/s Delhi Integrated Multi-Modal Transits System Limited (DIMTS) for submitting the preliminary survey report of proposed four sites. The preliminary survey report was submitted by M/s DIMTS in August 2009. However, the project was abandoned abruptly as the scheme was not in accordance with the provisions of the Act. Thus, the expenditure of ₹ 35.96 lakh on preliminary survey became infructuous.

The Board accepted the audit finding (March 2013) and stated that the DIMTS was asked to refund the amount of ₹ 35.96 lakh paid for the preliminary survey report, as it did not submit report. The reply is factually incorrect as DIMTS had submitted preliminary survey report in August, 2009.

3.4.6.2 Avoidable expenditure of ₹ 12.70 lakh for Mobile Crèches

The Board entered into an agreement with the Mobile Crèches for working mothers for a period of one year in August 2008 on single offer basis and released ₹ 12.70 lakh for this purpose. Section 35 of the Act, clearly states that facilities for crèches are to be provided by the employer. As such, the Board was not mandated to provide these facilities to the construction workers. Thus, the expenditure of ₹ 12.70 lakh could have been avoided.

The Board accepted the audit finding (March 2013).

3.4.7 Financial management

3.4.7.1 Loss of interest

The Board had not laid down any policy for investment of cess funds. Absence of investment policy and imprudent decisions resulted in loss of interest amounting to ₹ 4.24 crore. Such cases are discussed in succeeding paragraphs.

(a) Injudicious investment of funds and loss of interest of ₹ 3.48 crore

The Board invested an amount of ₹ 222.10 crore out of Cess Fund in various fixed deposits in banks, though the rate of interest on these fixed deposits was lower as compared to the domestic term deposit rate of SBI during the period of investment (2009-10). The decision of the Board to invest funds at lower interest rate than the domestic term deposits rate, was not financially prudent and resulted in loss of ₹ 3.48 crore to the Board.

In its reply, the Board stated that the Act being comparatively new and due to non availability of Accounts functionary in Board, funds were deposited in Current Account. After maintaining a minimum balance of ₹ 50 lakh, excess amount was diverted to Multiple Option Deposit (MOD) Account,

fetching higher returns and after accumulation of ₹ 50 crore in MOD, the same was invested as per recommendation of the Funds Investment Management Committee. However, the fact remains that the Board incurred a loss of interest of ₹ 3.48 crore.

(b) Loss of ₹ 0.76 crore due to inefficient cash management

Considering that the Board had a balance of ₹ 407.75 crore in Current Account as on 12 November 2010, the Special Commissioner (Labour) directed (25 November 2010) that funds available in Current Account should immediately be invested after retaining an amount required for meeting committed liabilities. Accordingly, a Savings Account was opened and an amount of ₹ 421.96 crore was deposited in it on 14 February 2011. Thus, the Board took two and half months to transfer the amount from Current Account to Savings Account. Even at this stage, funds were not invested in term deposit schemes to fetch higher rate of interest. The Board incurred interest loss amounting to ₹ 0.76[†††] crore for the period from 15 February 2011 to 31 March 2011.

In its reply, the Board stated (March 2013) that the process of completing the formalities and investment of funds took around 40 days and it was not possible for the Board to invest in Term Deposit scheme. Each and every decision of the Board is implemented in due course.

The reply is not acceptable as funds were transferred to Saving Account after 80 days of direction of the Special Commissioner (25 November 2010) and surplus funds were not invested in Term Deposit Scheme.

3.4.8 Levy and collection of cess

3.4.8.1 Improper maintenance of accounts relating to collection of cess

Under the provision of the Act, a cess at the rate of one *per cent* of the total cost of construction is to be levied on the employer. The primary responsibility of payment of cess lies with the employer who is required to pay the cess due to the cess collector within 30 days of the completion of construction or within 30 days of the date on which assessment of cess payable is finalized, whichever is earlier. In case of buildings and other construction work of the Government or a Public Sector Undertaking (PSU), the Government or the PSU, as the case may be, is required to deduct the cess payable from the bills paid for such works. In cases where prior approval for a construction work from a local authority is required,

[†††] The interest loss of ₹ 0.76 crore has been calculated on ₹ 421.96 crore for 44 days with the difference in rate of interest in Savings Bank and rate of interest on Term Deposit for 15 to 45 days, i.e. 3.5 *per cent* and 5 *per cent*

every application for such approval is to be accompanied by a crossed demand draft in favour of the Board for the amount of cess calculated on the basis of estimated cost of construction. The amount so collected by the Government or PSU or cess collector or local authority is to be transferred to the Board within 30 days of its collection.

Audit Scrutiny of records revealed that the Board has no mechanism to assess the details of construction activities being carried out in Delhi on which cess is payable. The local bodies like MCD, DDA etc. which are to collect cess on constructions carried out by individual contractors, do not send any information regarding the total cess collected by them and actually remitted to the Board. The Board also has no mechanism in place to obtain such information from these agencies. Two cases noticed by Audit, are enumerated below:

A test of the records in the office of the Deputy Labour Commissioner (East) (DLC), revealed that the MCD collected an amount of ₹ 2.66 crore as cess on private Building Plans sanctioned by it during the period from May 2006 to November 2008. Similarly, it was observed in the office of Deputy Labour Commissioner (North), that the MCD collected an amount of ₹ 1.46 crore as cess during 2009-10. However, MCD did not credit the amount of cess collected, in Board's Account till date. The other Districts Authorities had no information regarding collection of cess by local bodies. In the absence of proper mechanism, the actual cess due and collected by these agencies could not be ascertained in audit.

The Board in its reply accepted the audit observation and stated (March 2013) that cases were being monitored and the concerned agencies/persons were being pursued through correspondence and notices.

3.4.9 Human resource management in the Board

Adequate staff in an organisation, is of paramount importance in carrying out its responsibilities in an efficient and effective manner. As per information furnished by the Board, it has a sanctioned strength of 179 in various cadres, however, no regular staff has been recruited since its inception.

The Government of NCT of Delhi appointed (August 2000) Assistant Labour Commissioners and Labour Officers as registering officers. Thereafter, in July 2005, the Inspecting Officers and Labour Officers were appointed as Cess Collectors and the Deputy Labour Commissioners of nine Zones as Assessing Officers to perform the functions provided under the Act. The Labour Commissioner, Government of NCT of Delhi was appointed as Appellate Authority in July 2005.

Therefore, though the Board was constituted in September 2002, the cess collectors, assessing officers, and appellate authority were appointed only

in July 2005. The Board had neither formulated any Recruitment Rules nor had taken any action to fill the posts sanctioned by it, for its smooth functioning. The Board had contractual staff strength of 89 to carry out its regular functions besides two officials on deputation as on October 2012. The shortage of staff was of particular significance as the officers of Labour Department appointed for various functions of the Board under the Act, were already pre occupied with their own work. Due to such a severe shortage of staff, the Board was not in a position to ensure satisfactory discharge of its statutory responsibilities.

In its reply, the Board stated (March 2013) that steps would be initiated for regular appointment of vacant posts in future.

3.4.10 Internal control mechanism

Internal control is the process designed to ensure reliable financial reporting, effective and efficient operations and compliance with applicable laws and regulations. Therefore, to obtain reasonable assurance about its functioning, an organization is required to establish an independent and effective internal audit, an integral part of internal control mechanism. The Board had neither an internal audit wing of its own nor any other Government agency conducted its internal audit.

In its reply, the Board accepted that there was no full time Accounts functionary during 2002-2012. However, internal audit of Books of Accounts was conducted by the empanelled Chartered Accountants.

The contention of the Board that internal audit was conducted by empanelled Chartered Accountant is not tenable as it had not furnished any internal audit report to Audit.

3.4.10.1 Other shortcomings

Various provisions have been provided in the Act and Rules framed there under, to guide and govern the activities of the Board such as budget, annual report, assessment and collection of cess, registration of workers etc. The examination of records, however, revealed that many of these provisions were not being adhered to or complied with. The deficiencies noticed in this regard are given as under:

- Section 25 and 26 of the Act require the Board to submit its annual budget and annual report to the Government for sanction every year. However, it had not submitted these budgets and reports to the Government up to 2011-12 since inception.
- Rule 253 specifies that the Board shall ordinarily meet once in two months. Accordingly, the Board should have conducted a minimum of 58 meetings from September 2002 to 31 March 2012, but only 22 meetings were held.

- Section 4 of the Act provides for constitution of a State Building and Other Construction Workers Advisory Committee (the State Advisory Committee) to advise the State Government on such matters arising out of the administration of the Act, as may be referred to it. The first Delhi Advisory Committee (DAC) was constituted (October 2002) for a period of three years i.e. after a delay of two years from the issue of notification of Act. The tenure of the Committee was over in 2005, but the same was not reconstituted thereafter. The Board in its reply attributed the same to administrative reasons.
- Rule 267 specifies that a beneficiary of the fund shall contribute ₹ 20 per mensem to the welfare fund and Rule 285 provides that on the death of a member, the amount of contribution standing in his credit shall be given to his nominee or legal heir. However, it was observed that the Board had not been collecting the contribution from the registered workers.
- Section 27 of the Act provides that the Board shall maintain proper Accounts and other relevant records and prepare an Annual Statement of Accounts in such a form, as may be prescribed, in consultation with the Comptroller and Auditor General of India. Section 27(3) and 27(4) further specify that the Accounts of the Board shall be audited by the Comptroller and Auditor General of India annually and the Board shall furnish to the State Government before such date, as may be prescribed, its audited copy of Accounts together with the Auditor's Report.

The Board accepted (March 2013) the audit observations.

The Audit scrutiny revealed that the Annual Accounts of the Board for the years 2002-03 to 2009-10 were approved by the Board in its 23rd meeting in July 2012. However, these accounts have not been furnished to the Comptroller and Auditor General of India for audit. The Annual Accounts for the years 2010-11 and 2011-12 were yet to be prepared and approved by the Board (December 2012).

Conclusion

The Board, established in 2002, was entrusted with the task of providing welfare measures to the building and other construction workers as envisaged in the central legislation. The Board did not fulfill most of its mandated objectives due to absence of any perspective planning. Registration of workers is one of the most primary and important functions of the Board, which facilitates these workers, to avail benefits under various welfare schemes. However, the Board had no system in place for identifying and registering all the eligible construction workers and as a result, only a miniscule percentage of these workers were benefited.

Efforts taken by the Board to reach out to these workers through various awareness programmes were not adequate. Actual benefits delivered to a small fraction of construction workers through various welfare schemes were insignificant as compared to the total amount of cess collected by the Board. The Board had no mechanism in place to monitor the collection of cess by parastatal agencies. The functioning of the Board was suffering due to lack of human resources.

Recommendations

The Board may:

- *adopt a comprehensive human resource policy, as it has to cater to the most marginalized section of the society. It should be equipped with a qualified workforce for its effective and efficient working.*
- *put in place a system for proper assessment and collection of cess in coordination with all concerned agencies responsible for approval of building plans.*
- *initiate steps for maintaining proper accounts and audit thereof, besides creating a sound internal control mechanism.*
- *ensure that an awareness campaign is launched so as to make the maximum number of construction workers aware about their rights to welfare measures available under the Act.*