

Understanding the Implementation of Pradhan Mantri National Dialysis Programme in India

PAN INDIA STUDY

By

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Dr. Sajini B Nair & Dr. Bashir Ahmad Bhat

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Executive Summary

The Pradhan Mantri National Dialysis Programme, rolled out in 2016 as part of the National Health Mission (NHM) for provision of free dialysis services to the poor, is now in the 6th year of implementation. It was thought necessary to have an appraisal of the implementation of this scheme which will help the Government to understand the problems if any in its implementation and introduce necessary intervention so that the intended benefits of this scheme are maximized. So the main objectives are to understand the performance of the selected dialysis centres and to understand the perspectives of beneficiaries so as to assess their satisfaction on services received under the programme. This study also made an effort to understand the Providers perspective so as to identify the challenges in implementation of the PM-NDP.

The study uses both secondary and primary data. Information available from NHM Programme Management Unit in the selected Districts was collected to assess the overall performance of the programme in the selected districts towards the first objective. For assessing the perspective of the beneficiaries and their satisfaction with the services, information from the patients who are utilizing services from the dialysis centres was collected. For understanding the challenges in implementation of the programme, in-depth interviews with the Programme Coordinator in charge of implementation of the programme, the Medical Superintendent/Medical Officer in charge of the dialysis unit, the Dialysis Technician, the designated Staff Nurse was conducted.

The study was conducted in 17 States where a PRC is located. From each State information was collected from 6 Dialysis Centres located in District Hospitals/Sub District Hospitals and Community Health Centres. From each Dialysis Centre information was collected from 100-120 patients between January to March 2023. A total of 1994 patients covering 101 dialysis centres from 78 districts distributed in 17 States in India were interviewed right at the dialysis centres.

Main Findings of the study are the following

Functioning of Dialysis Centres

In a dialysis centre, majority of the patients come with the condition of multi-morbidity. Dialysis centres have to have some of the basic equipments available and functional.

☞ In most of the centres, some of the equipments are made available either within the dialysis centre or the centre uses the available equipments in the hospital to which it is attached so that the dialysis process is not disrupted. Amongst various functionality parameters, well maintained RO

water purification system was found to be functional at all the visited dialysis centre.

☞ Lesser proportion of dialysis centres at SDH/CHC have availability of these equipments as compared to dialysis centres at district hospital. Dedicated crash cart for systematically storing medicines, injection and consumables like masks, hand gloves, head caps etc. are available at 85 percent of the centres.

☞ Dialyzer reprocessing is done at 76 percent of the dialysis centres. It was reported that now single use dialyzers are increasingly preferred, although costly, to avoid any kind of possible infection during dialysis process. Most of the dialysis centres utilize OT and CSSD of the district hospital where they are located. Only one in three DH selected have HDU and 14 percent of the SDH maintains one.

☞ Considering the mode of implementation of the dialysis centres functioning, higher proportion of 'In-house' dialysis centres appear to be better placed in availability of equipments, have ECG machines, ACT and medical gas pipeline with each bed compared to dialysis centres under PPP mode. The State run mode of implementation as observed only in Kerala also is better placed in terms of availability of equipments.

☞ Dialysis centres that function on 24 x 7 basis and those with more number of beds face severe staff crunch necessitating staff on duty to take multiple shifts. The staff shortage is evident from the Patient-Technician and patient-Staff Nurse ratios in the centres. Around 80 percent of the dialysis centres have maintained a patient-technician ratio below 3:1. About 63 percent of dialysis centres have patient-nurse ratio as prescribed in the guidelines. About 8 percent and 16 percent of the dialysis centres have patient-technician and patient-nurse ratio of more than 5, in other words, these centres have only one dialysis technician and dialysis staff nurse for 5 or more beds.

☞ Availability of Nephrologist is only through tele-consultation in some States. A Nephrologist empanelled with the agency under PPP mode is consulted only in case of emergency. Lack of awareness among staff on the functionality of dialysis, especially managed on internal arrangement.

Patient Perspective

Characteristics of Beneficiaries

☞ Large majority of the patients availing services under PMNDP are men and male patients outnumber female patients in each state. The mean age of the respondents was 52 years, however younger people in a few states are also on dialysis. Large majority of the patients were literate however, illiterate patients also account for 13 percent of the dialysis patients in our sample. Large majority of the patients are not working and mostly the PMNDP beneficiaries belong to lower income group.

Morbidity and treatment

☞ Very few patients did not experience any symptoms related to chronic kidney diseases. The most frequent symptoms reported by the patients were swelling of limbs (57%), vomiting (47 %), fatigue (42 %) and swollen face (40 %).

☞ More than three-quarters of respondents (78%) who had experienced any symptoms related to kidney problems had actually sought treatment for these symptoms. However, more than half the respondents (64%) had visited a private hospital/clinic for the first time for the treatment of their kidney-related symptoms and only 30 percent have visited a public health facility. Two-third of respondents who did not seek treatment for symptoms had taken these symptoms lightly, which clearly indicates that people in general are not aware of the early symptoms of chronic kidney diseases.

☞ As kidney transplantation is one of the options of treatment, it was found that the doctors had recommended kidney transplants in the case of 42 percent of the patients and half of the patients who were recommended a kidney transplant by a doctor had ever tried for a kidney transplant.

Process Dimension

☞ There has been massive shift from private to public health facilities for dialysis in almost all the States with the implementation of PMNDP programme as indicated by the health facility where the patient underwent dialysis.

☞ This shift was stated to be primarily due to non-affordability, lack of transportation, distant from home and long waiting time for dialysis. So the PMNDP offered dialysis at affordable rates and easy access and better treatment facilities made the patients opt for dialysis under PMNDP.

☞ The frequency of 3 dialyses per week in a significant proportion of cases speak of the severity of illness but majority of the patients report the schedule to be convenient, patients are regular in taking medicines and the only difficulty in getting medicines is that all medicines prescribed by Nephrologists are not available at the hospital and hence they incur expenditure on medicines.

Economic dimension

☞ Patient responses on higher expenditure indicate that in the hospitals where a Nephrologist is not posted, the medicines prescribed by another Nephrologists, from Government or private sector, cannot be procured by the hospital and distributed through the Pharmacy because of which patients have to buy from medical stores outside the hospital. This has resulted in higher expenditure among the BPL patients which need to be

addressed. All medicines are not always distributed from the Pharmacy free of cost and BPL patients especially bear the burden of higher expenditure on medicines.

☞ A possible solution to reduce the OOPE on medicines is procurement of medicines prescribed by the Nephrologist at the main DH where the Nephrologist is posted and need based distribution to other hospitals and satellite dialysis centres.

☞ In those dialysis centres established in district or sub district hospitals in States where the labs are not well developed, all blood investigations required for a patient on dialysis are not possible leading to dependence on other labs outside the hospital which results in higher expenditure on blood investigations. Such higher expenses are reported by patients in AP, Bihar for instance in the first group of State, J & K again in the second group of States. Expenses in Rajasthan in the third category and Kerala in the fourth are minimum. Analysis by income category also highlights the higher expenditure among BPL patients among the centres operational in PPP mode.

☞ In the hospitals where either the imaging services are not adequate or machines are non-functional frequently, patients report of spending on certain diagnostic services although the cost is much less compared to the other heads already mentioned.

☞ Expenditure on blood investigations, consumables and diagnostics, although much less compared to that on transportation and medicines, are avoidable either by developing the lab facilities and the imaging services in such hospitals to include the tests as per requirement of the dialysis patients (BPL category) or making provisions to reimburse the cost towards the tests not provided at the dialysis centres.

☞ Financial burden has reduced considerably as evident from the lesser proportion of patients who had to give away with their belongings after coming under PMNDP.

☞ The patient interviews point to very low coverage in insurance schemes in many States. Increasing the coverage of insurance schemes has to be prioritized by every State so that the patients especially on dialysis who require long term treatment get the benefit of the schemes.

Satisfaction with services

☞ The patient satisfaction levels discernible from the study shows the impact the PM National Dialysis Programme created in various States with the free, easy and access to good quality care for the treatment of kidney diseases.

☞ Overall satisfaction levels on treatment, care provided, privacy, cleanliness and hygiene is high. However manpower availability is an issue which may have brought down the satisfaction levels of patients.

☞ The ADL limitations does not appear to be bothering a large proportion of patients when compared to research based evidence during the past decades. This is perhaps due to the access to treatment during the early stages with the implementation of PMNDP.

☞ The findings clearly indicate that the life years extended due to free and easy access to dialysis under the PMNDP all over the country has provided the patients opportunities to contribute to their own family and the society and has made a large number of patients to continue to be socially active as reflected in the satisfaction levels.

☞ Dialysis centres functioning under 'In-House' mode need more systemic support for training of staff in following the prescribed dialysis procedure as most of the centres deploy staff on internal arrangement who keep on changing, which necessitates provision of regular manpower.

☞ Both the 'PPP' and 'In-House' mode dialysis centres need adequate supervision and monitoring to sustain the infrastructure created for affordable dialysis services at public health facility. Authorities should also be sensitized about the growing need for dialysis services among the under-privileged groups. Kerala is a good example in this regard functioning in State run In-house mode where the LSGD plays an important role in providing the necessary infrastructure support by raising project funds to meet the needs of the centre.

☞ Review of Quality of data in PMNDP Portal is essential as recording of data on infrastructure, availability of functional equipments, number of patients waiting for dialysis, consolidation of data on dialysis sessions etc. was not systematic in most of the centres

☞ Overall the access to free dialysis at the numerous centres in each State/UT is a blessing to those suffering from kidney diseases. Observed decreasing mean age of patients requiring dialysis, minimum age of patients being 20 years and 3 to 5 percent of the patients less than 40 years and growing incidence of non-curable life style morbidity and CKD and the observed longer span of bearing the disease burden demands more inputs in the form of additional manpower support, infrastructure support to run the dialysis centres as per guidelines for further improving the PM National Dialysis Programme.

1. Background

1.1 Introduction

Incidence and prevalence of chronic kidney disease (CKD) is increasing globally (GBD, 2017). In India, deaths due to renal failure constituted 2.9 percent of all deaths in 2010-13 among 15-69 year-olds, an increase from 2.1 % in 2001-03 (Lancet Global Health, 2017). Of the top ten individual causes of death in India in 2016, deaths due to NCDs increased between 1990 and 2016; the all-age death rate increased significantly for ischaemic heart disease (54.5%), diabetes (130.8%), and chronic kidney disease (32.7%) (Dandona et al., 2017). With increasing proportion of elderly people and increasing prevalence of chronic non communicable diseases, Chronic Renal Diseases also have become a major health problem in India. Diabetic nephropathy is said to be the main cause of CKD (Agarwala, 2005). With high burden of diabetes and uncontrolled hypertension, renal failures are likely to be on the increase. Studies echo the vulnerability to CKD among the population having high prevalence of type 2 diabetes mellitus, hypertension, (Varma, 2015, Anupama and Uma, 2014). A study in rural Kerala, the so called diabetic capital, showed high burden of renal disease among the rural population with prevalence of 4.86 percent. Absence of gender wise difference in the prevalence rates and diabetes being the most important risk factor for renal failure was shown by Haveri et. al (2016). With increasing number of patients requiring dialysis out of pocket expenditure also increased substantially. The various insurance schemes covered a part of the expenditure. CKD also has been shown to be having a big impact on the financial status of the patient over the past two decades (Bommer, 2002; Suja et. al, 2012; Ramachandran and Jha, 2013; Wang et. al, 2017). Disability, work loss and out-of-pocket expenditure have adverse impact not only on the socioeconomic status of patients and their families but also on their psychological wellbeing.

The increasing number of patients on End Stage Renal Disease (ESRD) in India with 2.2 lakh new patients being added demanding 3.4 Crore dialysis every year and their increasing expenditure on dialysis and kidney transplantation as highlighted in research studies made the Government feel the necessity of a Dialysis program. Such a programme would meet both provision of dialysis and also reduce impoverishment on account of out of pocket expenditure for patients. The Pradhan Mantri National

Dialysis Programme was rolled out in 2016 as part of the National Health Mission (NHM) for provision of free dialysis services to the poor. The Guidelines for Pradhan Mantri National Dialysis Programme envisage provision of dialysis services under NHM in PPP (Public Private Partnership) mode (<https://pmndp.mohfw.gov.in>).

As per the guidelines, the private partner is to provide medical human resource, dialysis machine along with Reverse Osmosis (RO) water plant infrastructure, dialyzer and consumables, while the space, power, and water supply within District Hospitals is to be provided by the State Government. Currently, under NHM 100 % of the service procedure fees for patients from below poverty line (BPL) economic group is covered. However, non BPL patients would have the benefit of accessing the services close to the community at the district hospitals at same rates as paid by the Government for the BPL patient. The person requesting for free dialysis can avail the service under Pradhan Mantri National Dialysis Program (PMNDP). The tests are done through the free diagnostic program or Governments own laboratory. The guidelines also mentions that for BPL families registered under RSBY, the cost of dialysis care shall be catered through RSBY funding upto its maximum coverage. The additional resources required would be provided to the state under the National Health Mission. With these developments, majority of patients in India now receive renal replacement therapy in hemodialysis centre. The number of patients on Hemodialysis and the number of hospital based and free standing units is steadily growing (Operational Guidelines, <https://pmndp.mohfw.gov.in>).

India has established about 1364 dialysis centres by February, 2023 distributed in 654 districts out of 751 districts. The number of functional dialysis machines count up to 9103 and in February, 2023, 18 lakh patients availed services in 197.8 lakh sessions. In other words, on average 11 dialysis sessions were given to every patient in a month or each patient required close to 3 dialysis sessions per week. For effective rollout of dialysis services and coordinated monitoring of the services a dedicated portal (<https://pmndp.mohfw.gov.in>) has been created for maintaining data of every dialysis patient registered under PMNDP and all the centres registered to provide dialysis services under PMNDP.

So every small State has atleast 1 dialysis Centre. These centres are located in General Hospitals, District Hospitals, Taluk level Hospitals (SDH) and also in

CHCs/UPHC in a few districts. With the increase in the number of dialysis centres at the Government hospitals, there has been substantial decrease in the cost per dialysis. The BPL patients have been benefitting from the free services and reducing their out of pocket expenditure considerably. The Health Ministry's issued guidelines to the States to include peritoneal dialysis under the programme, to reduce patients' out-of-pocket expenditure. So home based peritoneal dialysis programme too is on the run. This programme is now in the 6th year of implementation with state wide differentials in initiation of the programme and there is hardly a national level study which has assessed the implementation of this programme. Therefore, it was thought necessary to have an appraisal of the implementation of this scheme. Such an exercise will help the Government to understand the problems if any in its implementation and introduce necessary intervention so that the intended benefits of this scheme are maximized. In this background, the present study attempts to understand the functioning of selected dialysis centres. Success of every programme rests on patient satisfaction and hence patient's perspective on services rendered is proposed to be analysed. Many challenges throw up during the implementation of the programme and addressing the challenges is necessary for the smooth functioning of the programme. The challenges are identified in the Provider perspective. So the main objectives are:

1.2 Objectives

2. To study the performance of the PM National Dialysis Programme in India using the available service statistics
3. To understand the perspectives of beneficiaries so as to assess their satisfaction on services received under the programme.
4. To understand the Providers perspective so as to identify the challenges in implementation of the PM-NDP

1.3 Data and Methodology

1.3.1 Data

The study proposes to use both secondary and primary data. Information available from NHM Programme Management Unit in the selected Districts and also the respective States was collected to assess the overall performance of the programme in

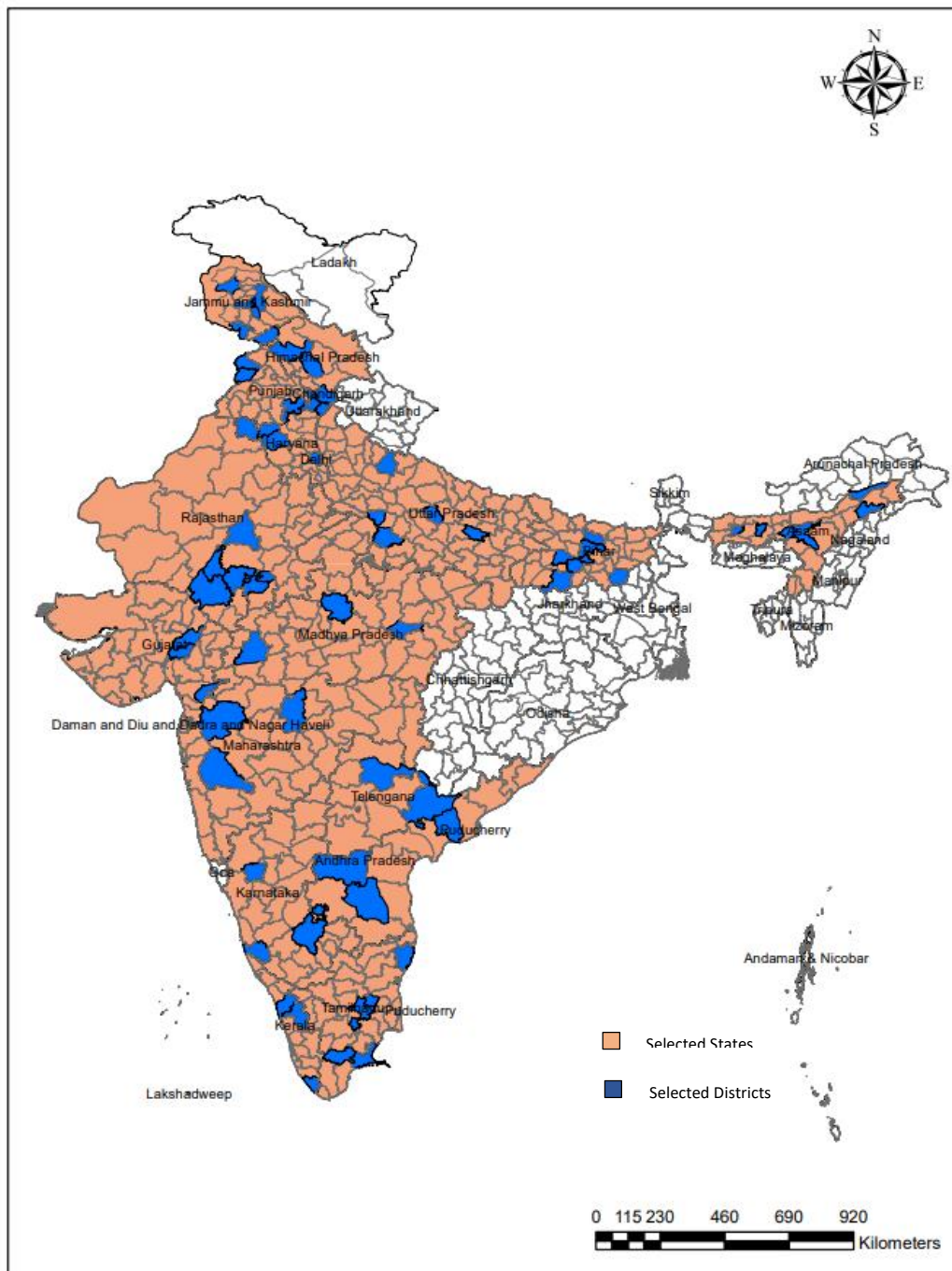
the selected districts towards the first objective. For assessing the perspective of the beneficiaries and their satisfaction with the services, information from the patients who are utilizing services from the dialysis centres was collected. Informed consent was obtained before interviews with the patients. For understanding the challenges in implementation of the programme, in-depth interviews with the Programme Coordinator in charge of implementation of the programme, the Medical Superintendent/Medical Officer in charge of the dialysis unit, the Dialysis Technician, the designated Staff Nurse was conducted.

1.3.2 Study design

A descriptive study design was adopted to understand the implementation of PMNDP and challenges if any in operating as per guidelines which will enable to provide feedback on the services offered, determine the outcome which will help to provide inputs on program processes and if needed any change in goals.

The study design adopts the method of selection of States where the PRCs are located, second selection of districts by geographic region so that it gives a representation of the State. All the districts of the State where a Dialysis Centre has been established under PMNDP was divided into three regions i.e South, Central and North. The list of dialysis Centres was prepared district wise. Since, Dialysis centres have been established in a phased manner in every state, to have a good assessment of the performance, the centres established which has been functioning for atleast 1-2 years before the period of survey was selected. From each region one district was selected randomly and from each district two dialysis centres were selected. This enabled coverage of 6 dialysis centres in each State. Generally the Dialysis Centres have been established at District Hospitals, but in some districts these units have been established at both DHs and CHCs/SDH/UPHC. So one Dialysis Centre which has been established under the programme at DH and the second one established in a SDH/CHC/UPHC was made the criteria for selection. But in case there is only 1 dialysis Centre in the district then the second centre was selected from another district in the region. The second dialysis centre selected was that established in a DH/SDH/CHC/UPHC. So 6 dialysis centres was the sample size from the State. The period of survey was between January to March 2023 in different States.

Figure 1.1: State wise districts covered in India for the Study



For calculating the number of beneficiary interviews, the number of dialysis conducted per day in the centre is taken as the criteria. The number of dialysis beds varies between centres and a preliminary review in this regard showed that minimum 4-5 dialyses are provided in a day. Dialysis schedule is mostly thrice a week which meant patients would be the same from the 4th day. So, fixing 3 days for beneficiary interview along with stake holder interviews at the facility level, 20 patients who have

availed service from the dialysis centre was the maximum number fixed. The total number of patient interviews was fixed between 100-120 so that after eliminating for non-response errors there will be minimum 100 beneficiaries from the State.

Sample thus selected added up to 1994 patients covering 101 dialysis centres from 78 districts distributed in 17 States in India (See Table 1.1: Appendix I).

Dialysis centres are established in In-house, PPP and hybrid mode in different States. Among the States selected for the study, dialysis centres are operational in PPP mode in 10 States, in in-house mode in 5 States 10 States.

Table 1.3.1: Mode of implementation of Dialysis Centres in selected States

State	Mode of Implementation
Karnataka	PPP
Telangana	PPP
Gujarat	In-house
Odisha	In-house & PPP
Punjab	In-house
Delhi	PPP
Rajasthan	In-house & PPP
Tamil Nadu	In-house & PPP (07 Centres)
Assam	PPP
Kerala	In-house
Uttar Pradesh	PPP
Bihar	PPP
Maharashtra	In-house
Haryana	PPP
Madhya Pradesh	PPP
Himachal Pradesh	PPP
Jammu & Kashmir	In-house
Andhra Pradesh	PPP

Source: <https://pmndp.mohfw.gov.in>

Although Rajasthan and Tamil Nadu are listed in the hybrid mode, among the dialysis centres selected, all 6 centres are operational in In-House mode due to the few centres (only 7 centres) in the State operating in PPP mode. So Tamil Nadu is grouped in In-

House mode in the present study. The list of dialysis centres selected is provided in Table 1.1, Appendix I.

1.3.3 Study Tool

A detailed interview schedule was used for patient interview. Information on background and individual characteristics of respondents was restricted to minimum number of questions keeping in mind the ethics to be followed in patient interviews. The schedule included 6 sections (Appendix III):

1. *Household characteristics*: No. of member in HH, Type of house and ownership, source of drinking water, toilet facility, fuel used for cooking, income category
2. *Individual Characteristics*: Age, education, marital status, occupation
3. *Morbidity*: Co-morbidity, duration of kidney disease, and haemodialysis, treatment seeking behaviour, anthropometric measurement, kidney transplantation
4. *Process dimension*: registration, place of dialysis and change in dialysis centre, dialysis schedule, frequency, regularity of medicine intake, availability of medicines.
5. *Economic dimension* – expenditure and financial burden, insurance coverage
6. *Social dimension* – ADL limitations, ability to contribute to family and society and satisfaction on services

For the stake holder interview a review of the implementation process of the dialysis centre under the PMNDP in the State was first made after which in-depth interviews were conducted.

1.3.4 Data Collection

The Principal Investigator from each PRC with support from experienced Field Investigators/Data Assistants collected the required information from the Dialysis centres. PRC Kerala and PRC Srinagar imparted training in virtual mode to all the PRC staff. First a pilot survey for carrying out the patient interview was done by all the PRCs in their respective States. The quality of the interview schedule improved with editing based on the feedback of the pilot survey. Specific focus was given on the ethics to be followed in patient interviews.

Consent from the officer in charge of the dialysis centre was taken prior to the survey. Informed consent of the patient was taken for the patient interviews. Support of the bystander was sought in a few cases wherever necessary. Since the number of days was fixed as 3 days per dialysis centre, in centres where there were lesser number of dialysis beds and lesser number of patients, the option was provided for telephone interview to meet the sample size of atleast 100 patients from a State. Only a few telephonic interviews were necessary and interviews were done in the presence of the staff of the dialysis centre.

1.3.5 Data Processing

Data entry tool will be developed in CSPro 7.7.0 by PRC Kerala. Questionnaires were first edited and double entry was done to ensure quality of data. Data entry for 9 States were shared by PRC Kerala and PRC Srinagar and the rest were done by the respective PRCs for their State. Analysis was done using SPSS 20 version.

1.3.6 Exclusion criteria

Dialysis centres working in Private Sector are not included in the study.

Ethics Approval

Ethics approval for the study was obtained via the Ethical Committee, Institute of Economic Growth Delhi.

2. Functioning of Dialysis Centres

This chapter presents the status of functioning in general of selected dialysis centres in India based on data collected from the selected dialysis centres. The study covered 6 dialysis centres each from 3 districts each from 17 States. Present analysis is based on data collected from 101 dialysis centres from 17 states. Information on dialysis machines, dialysis beds, availability of equipments, functioning of certain procedures, infrastructure, support services, environmental parameters, equipment maintenance, human resources and training was collected from each centre. Study also assessed the challenges and constraints and sought suggestions to overcome the challenges from the Nodal Officer, and staffs deployed at the centre.

2.1 Availability of equipments

A dialysis centre is required to have all necessary equipments. This includes Dialysis Machines, dialysis beds for negative patients and dialysis beds for positive patients and certain diagnostic and health monitoring equipments.

In a dialysis centre, majority patients come with the condition of multi-morbidity. Dialysis centres have to have some of the equipments available and functional. Table 2.1 shows the status of availability of necessary equipments in the dialysis centres. Here the availability was assessed on the condition that it could be available within the dialysis unit or they have access to it at the hospital where the dialysis centre is attached.

Pulse oximeter is the most commonly available equipment, as seen, more than 95 percent of the dialysis centres have pulse oximeter to measure the oxygen concentration level and pulse rate. UV filters are available in 84 percent of the centres, ECG machine in 82 percent of the centres and multipara monitor with each machine in 64 percent centres.

Table 2.1: Proportion of dialysis centres according to equipments availability by type of facility and mode of dialysis centres

Equipments available	Facility Type		Mode of Dialysis Centre				Total
	DH	SDH/CHC	In-house	PPP	Hybrid	State run	
ECG machine	77.2	68.2	90.0	76.7	60.0	100.0	82.0
ACT (Automated Coagulation Machine)	44.3	40.9	56.7	45.0	20.0	50.0	50.5
Pulse oximeter	97.5	90.9	96.7	95.0	100.0	100.0	96.0
Dynamic water-saving device	51.9	18.2	33.3	56.7	20.0	50.0	44.6
UV filters	83.5	63.6	66.7	85.0	100.0	83.3	84.4
Monitors with each machine	73.4	54.5	63.3	71.7	60.0	83.3	64.4
Medical Gas Pipeline wall mounted oxygen supply with each bed	44.3	40.9	70.0	26.7	40.0	83.3	42.6
Number of Dialysis Centres	79	22	30	60	5	6	101

In most of the centres, some of the equipments are made available either within the dialysis centre or the centre uses the available equipments in the hospital to which it is attached so that the dialysis process is not disrupted.

In centres where the dynamic water saving device are reported to be not available in the dialysis unit it is available within the RO water plant and in some centres they do the functions manually which is reported as not available. It was found that lesser proportion of dialysis centres at SDH/CHC have availability of these equipments as compared to dialysis centres at district hospital.

Considering the mode of implementation of the dialysis centres functioning, higher proportion of 'In-house' dialysis centres appear to be better placed, have ECG machines, ACT and medical gas pipeline with each bed compared to dialysis centres under PPP mode. The State run mode of implementation as observed only in Kerala also is better placed in terms of availability of equipments. More than four-fifths of dialysis centres have UV filter and 72 percent centres have monitors with each machine. It was observed that majority of the centres are now being equipped with more advanced dialysis machine with in-built monitors and touch screen control panel.

In some centres where the equipments are not available within the centre and is has no access at times of need from the hospital it is reported as not available, as these

equipments are very much needed exclusively for the dialysis centre. So there is need to equip all the dialysis centres with all the required and necessary equipments wherever it is lacking.

2.2 Functionality

Every dialysis centre supposedly functions as per the protocols that are required to provide adequate care to the CKD patient coming for dialysis. The status of functionality of dialysis centres are captured in Table 2.2. These functionality parameters are routinely checked and supervised to ensure the proper functioning of the dialysis centre.

RO Water Purification System: Amongst various functionality parameters, well maintained RO water purification system was found to be functional at all the visited dialysis centre. To safely perform a dialysis operation, a large quantity of high purity dialysis water is needed. Single 4-hour dialysis treatment can use up to 150L of “ultra-pure” dialysis water. Producing this high-quality water is a multi-step filtration method that necessitates many stages of processing before it can be presented to the dialyzer membrane and the patient’s blood. A fully automated water purification and supply system based on reverse osmosis (RO) technique is the most vital part of the dialysis service.

Continuous water supply for dialysis procedure is ensured by storage of sufficient water for purification and storage of purified water. Generally 1000 liters capacity water tank is required for a three bedded dialysis centre. For any dialysis centre, 300 to 600 litres of water is required per patient per week depending upon the number of dialysis sessions of the patient. All Dialysis centres have water storage tank, except three dialysis centres at DH Paramakudi (Tamil Nadu), Civil Hospital Ambala Cant (Haryana) and Community Health Centre Deola (Maharashtra). Water storage tanks are made of stainless steel or PVC.

Crash Cart: Dedicated crash cart for systematically storing medicines, injection and consumables like masks, hand gloves, head caps etc. are available at 85 percent of the centres. Further, 90 percent of the PPP mode centres and 87 percent centres at DH have dedicated crash cart (Table 2.2).

Urea kinetic modelling: Urea kinetic modelling and Sodium variability are the two vital monitoring tools for adequacy of dialysis for any patient. It was found that 73

percent and 64 percent of the dialysis centres conducts the Urea kinetic modelling and Sodium variability respectively. More than 75 percent dialysis centre at DH and functioning in PPP mode are conducting urea kinetic modelling, while 69 percent of the centres at DH are conducting Sodium Variability for dialysis patient.

Table 2.2: Proportion of dialysis centres according to functionality by type of facility and mode of dialysis centres

Functionality	Facility Type		Mode of Dialysis Centre				Total
	DH	SDH/CHC	In-house	PPP	Hybrid	State run	
Urea kinetic modelling done	75.9	50.0	50.0	81.7	80.0	50.0	70.3
Sodium variability available	68.4	45.5	43.3	75.0	40.0	66.7	63.4
Use of Bi-carts is carried	67.1	59.1	63.3	68.3	80.0	66.7	67.3
Dialyzer reprocessing done	77.2	72.7	50.0	88.3	80.0	83.3	76.2
Reverse osmosis (RO) system properly maintained	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Water Storage Tank either Stainless Steel to PVC available	97.5	100.0	93.3	98.3	100.0	100.0	97.0
Water distribution system well placed	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Wall-mounted bed panel contains supply of oxygen	49.4	36.4	73.3	30.0	40.0	83.3	46.5
Crash cart is dedicated to the unit	87.3	77.3	76.7	90.0	60.0	100.0	85.1
Dialyzer storage room Common for positive and negative patients available	65.8	59.1	43.3	78.3	20.0	66.7	56.4
Number of Dialysis Centres	79	22	30	60	5	6	101

Dialyzer reprocessing: Dialyzer reprocessing is done at 76 percent of the dialysis centres. It was reported that now single use dialyzers are increasingly preferred, although costly, to avoid any kind of possible infection during dialysis process. Normally, a dialyzer can be used upto 10 times after each cycle of reprocessing. Dialyzer storage room is available at 66 percent of the centres at DH, 78 percent centres on PPP mode and overall in 56 percent of centres. As per the norms, each dialysis unit should have 200 sq.ft. area for storage purpose out of overall area of 175 sq.mt. for a 3-5 bedded dialysis unit.

2.3 Infrastructure:

Infrastructure available at the dialysis centres are presented in Table 2.3. This encompasses doctors duty room, CSSD, laboratory, dialyzer reprocessing room, AV fistula making facility, recovery room and peritoneal dialysis area, toilet facility for staff, patient and attendants. It was observed that none of the visited dialysis centres

have all the required infrastructure facility together. Highest among all the available infrastructure, 77 percent of dialysis centres have dialyzer reprocessing room. In DH based centres, 76 percent and PPP mode centres 80 percent have dialyzer reprocessing room.

Doctor's duty room is available in 57 percent centres, followed by 46 percent having operation theatre and 42 percent having CSSD.

Availability of OT and CSSD is a pre condition for setting-up of dialysis centre at any health facility. Most of the dialysis centres utilize OT and CSSD of the district hospital where they are located.

An arteriovenous (AV) fistula is a procedure that connects an artery to a vein in preparation for dialysis. An AV fistula is the type of dialysis access that is considered the best choice because it generally lasts longer and has fewer problems. Typically, it costs Rs.15000 to Rs.30,000 for making AV fistula in private health facility. This surgical procedure is mostly done at medical college. Patient recovery room and station for making AV fistula is available in 15 and 13 percent of the centres. It was told by many patients that facility of making AV fistula should be available at dialysis centre.

Table 2.3: Proportion of dialysis centres according to infrastructure availability by type of facility and mode of dialysis centres

Infrastructure availability	Facility Type		Mode of Dialysis Centre				Total
	DH	SDH/CHC	In-house	PPP	Hybrid	State run	
Doctor's duty room	59.5	31.8	56.7	50.0	80.0	50.0	57.4
CSSD (Central Sterile Processing Department)	39.2	36.4	60.0	25.0	60.0	50.0	41.5
Operation theatre	39.2	54.5	60.0	33.3	40.0	50.0	45.7
High dependency unit	32.9	13.6	30.0	28.3	40.0	16.7	30.9
Laboratory within the Dialysis centre	27.8	36.4	30.0	28.3	40.0	33.3	31.9
Dialyzer reprocessing room	75.9	54.5	56.7	80.0	60.0	66.7	76.6
Station and change room along with anaesthesia trolley for making AV fistula	13.9	4.5	6.7	15.0	0.0	16.7	12.8
Recovery room with 5 recliner beds	16.5	4.5	16.7	13.3	20.0	0.0	14.9
Peritoneal dialysis area	2.5	9.1	0.0	1.7	40.0	16.7	4.3
Number of Dialysis Centres	79	22	30	60	5	6	101

High Dependency Unit : An HDU is a specially staffed and equipped area of a hospital that provides a level of care intermediate between intensive care and the general ward care. HDU is available at 31 percent of the hospitals where the dialysis centre is established. Only one in three DH selected have HDU and 14 percent of the SDH maintains one.

Laboratory: One third of the centres have laboratory within dialysis unit. As per norms, a laboratory must be linked or set-up within dialysis unit for pathological tests of the dialysis patients. But since most of the centres are attached to DH, the lab services of the DH are well utilized.

Infrastructure for dialysis centres need to be created and provided under the PMNDP in all the centres. As per the norms, dialysis centres should have all the required space and infrastructure for effective services. Supply of water, round the clock electricity with power backup, toilets including its maintenance etc. are essential for dialysis services.

2.4 Support Services:

The details of availability of support services at the dialysis centres (Table 2.4) provides Support services required for a dialysis centre is mostly available at the studied facilities. Nearly all (98 percent) of all the centres have maintenance services for wards and beds on daily basis. Waiting area for the patients and attendants was available at 91 percent and 89 percent of the dialysis centres.

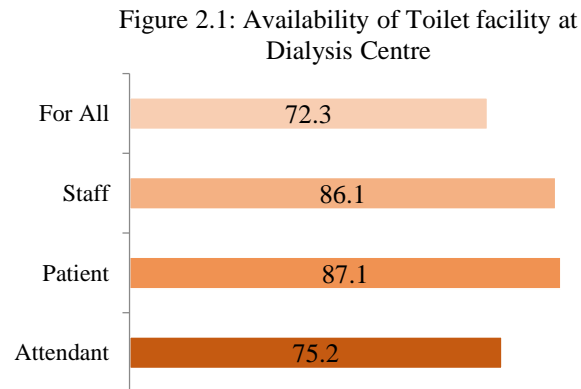
Table 2.4: Proportion of dialysis centres according to support services availability by type of facility and mode of dialysis centres

Support Service availability	Facility Type		Mode of Dialysis Centre				Total
	DH	SDH/CHC	In-house	PPP	Hybrid	State run	
Waiting area for attendants	89.9	81.8	80.0	91.7	100.0	83.3	89.0
Waiting area for patients	91.1	86.4	80.0	93.3	100.0	100.0	91.0
Arrangement for Housekeeping	88.6	90.9	80.0	95.0	100.0	66.7	90.0
Maintenance of wards, beds on daily bases	97.5	95.5	100.0	96.7	100.0	83.3	98.0
Dietary services	31.6	22.7	60.0	16.7	20.0	16.7	30.0
Number of Dialysis Centres	79	22	30	60	5	6	101

Arrangement for housekeeping was found to be available in 90 percent of the centres. It was observed that only 30 percent of the dialysis centres have dietary services. In all 26 percent of the dialysis centres have all the support services in place. For 29 percent of the dialysis centre functioning at DH and half of the dialysis centre functioning under in-house mode have all the prescribed support services.

Toilet facility: Availability of toilet facility was found at all the dialysis centres.

However, nine dialysis centres reported about non-availability of toilet facility exclusively for the dialysis patients and they use toilet facility of the hospital where they are located. Separate toilet facility for staff, patients and attendants is a prime



infrastructure required. About 72 percent of the dialysis centres (Figure 2.1), out of 101 dialysis centres studied have separate toilets for the staff, patient and attendant. Eighty-six and 87 percent centres have toilet facility for staff and patient respectively and only 75 percent centres have separate toilet facility for attendants who accompany patient.

2.5 Dialysis Machine and Beds:

Dialysis machine sare the integral part of the dialysis centre. Dialysis beds available at dialysis centre are divided into negative and positive beds. Negative beds are earmarked for the patient who have no history or symptom of any pathogenic infection and positive beds are earmarked for patients having HIV, Hepatitis-B and other infections. Positive beds are usually kept in isolation from the other beds and are not used for any other patients. In all 928 beds were available in the dialysis centres. However, not all the available beds were functional in few of the dialysis centres. Dialysis centres at DH have average 9.4 beds whereas in SDH/CHC 8.4 beds are available. State-run dialysis centres which are only operational in Kerala have 18.7 dialysis beds per centre on an average among the selected centres. Among all the

categories of health institutions and mode of implementation functional dialysis beds are less than available.

Figure 2.2 shows that one-third of all the dialysis centres had 6-10 beds, one-fourth of dialysis centres had 4-6 beds and 16 percent of dialysis centres had less than 4 beds available.

The number of dialysis machines available and

functional at the time of survey as depicted in Figure 2.3 indicates that the just about 3 percent of the dialysis machines are non functional.

Figure 2.2: No. of Dialysis Beds in Dialysis Centres

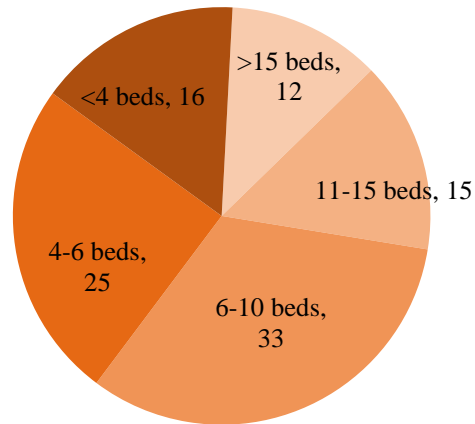
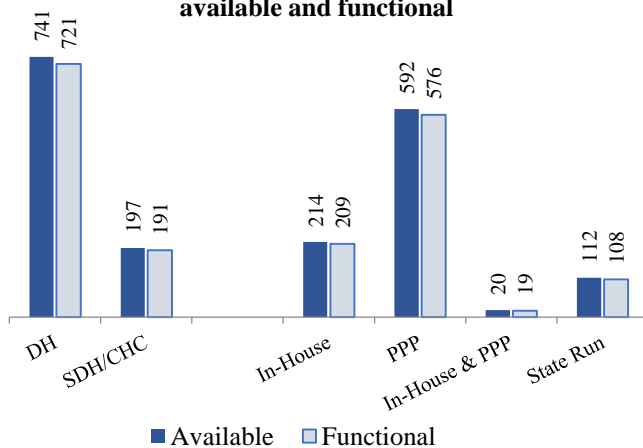


Figure 2.3: Number of Dialysis Machines available and functional



At DH 721 out of 741 dialysis machine were functional. At SDH/CHC out of 197 dialysis machines 191 were functional. Dialysis centres operational under PPP mode had more than 16 dialysis machines non-functional. As per the PMNDP guidelines and state specific MOU, under PPP mode, all the dialysis machines should be in

operational mode. In case of non-functionality, the dialysis centre operating agency is required to provide alternate arrangements to dialysis patients. It was reported by the staff at dialysis centres in Madhya Pradesh, for instance, that recently the state government has provided new dialysis machines. Old machine which are not operational are being discarded. The presence of a Bio-Medical Engineer and sound equipment maintenance system at DH level hospitals ensures functionality of dialysis beds to a great extent as noted in Kerala.

2.6 Human Resource:

Availability of trained human resource throughout working hours of dialysis centre is of paramount importance in operationalization of services of dialysis centre under

PMNDP. It was found that almost all the dialysis centres were functional with sub-optimal staff availability, particularly dialysis centre operating on PPP mode. Each dialysis centre should be supported with services of Nephrologist either at the facility or through the tele-consultation. Dialysis centre which have Nephrologist available only through tele-consultation, should have dedicated dialysis medical officer who should be trained in dialysis services. Generally a medicine specialist is given the responsibility to function as nodal officer for the dialysis centre. It was found that many centres had internally arranged staff in case of dedicated staff are not posted at the dialysis centre.

Table 2.5: Number of Dialysis Centres by human resources arrangement by type of health facility

Designation	Dedicated staff		Internally arranged staff	
	DH	SDH/CHC	DH	SDH/CHC
Medical Officer	53	13	31	10
Dialysis Technician	61	15	22	8
Dialysis Nurse / Staff nurse	56	16	42	12
Housekeeping	69	18	17	8
Sweeper	23	5	16	5

Among the dialysis centre at DH, 53 have their dedicated Medical Officer, while 61 had Dialysis Technician and staff nurse (Table 2.5). All 69 centres have their dedicated housekeeping staff but only 23 had a dedicated sweeper. For effective functioning of the dialysis centres, 42 centres have internally arranged staff nurse from the hospital where they are situated, and 31 also made internal arrangement of Medical Officer. This shows that lack of dedicated staff for dialysis centre is supplemented by the internal arrangement.

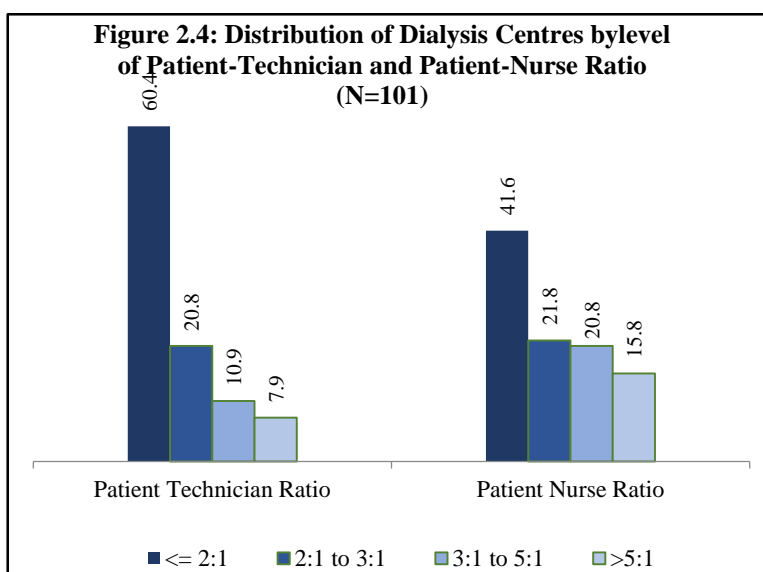
Availability of the manpower from the mode of implementation of dialysis centre (Table 2.6), points to efforts made by the hospital in keeping dedicated housekeeping staff in 66 PPP mode dialysis centres. Dedicated Medical Officer were posted at 10 in-house centres, 49 PPP mode centres and 2 out state run centres and the rest was managed by internal arrangement of Medical Officers. Dedicated dialysis technician were posted at 19 in-house centres, 55 PPP mode centres and 2 state run centres remaining being managed again on internal arrangement. However, none of the

centres functioning under hybrid mode, have dedicated dialysis technician and staff nurses posted.

Table 2.6: Number of Dialysis Centres by human resources arrangement by mode of implementation

Designation	Dedicated staff				Internally arranged staff			
	In-house	PPP	Hybrid	State Run	In-house	PPP	Hybrid	State Run
Medical Officer	10	49	5	2	25	9	3	4
Dialysis Technician	19	55	0	2	19	4	3	4
Dialysis Nurse / Staff nurse	23	44	0	5	34	8	5	7
Housekeeping	12	66	8	1	13	6	5	1
Sweeper	10	11	5	2	12	3	3	3

In order to understand the availability of two crucial human resources, dialysis technician and dialysis staff nurse, patient-technician and patient-nurse ratio were calculated. It is mandatory to have a patient-technician and patient-nurse ratio of 3:1 for any dialysis centre for effective and satisfactory dialysis services. Generally a dialysis session lasts for 3-4 hours and role of dialysis technician and staff nurse are crucial in maintaining quality of services. Figure 2.4 shows that

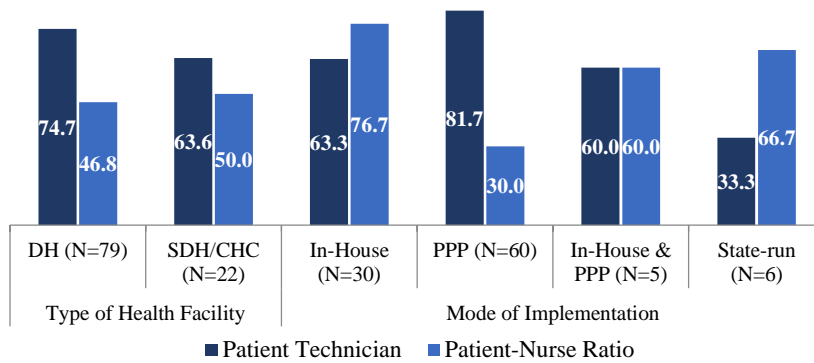


around 80 percent of the dialysis centres have maintained a patient-technician ratio below 3:1. In other words, for every 3 or less beds there is one technician available ensuring constant care to the patient.

About 63 percent of dialysis centres have patient-nurse ratio as prescribed in the guidelines. About 8 percent and 16 percent of the dialysis centres have patient-technician and patient-nurse ratio of more than 5, in other words, these centres have only one dialysis technician and dialysis staff nurse for 5 or more beds.

A further disintegrated analysis of patient-technician and patient-nurse ratio according to the type of health facility and mode of implementation of PMNDP as depicted in Figure 2.5 shows that nearly three-fourths of all the dialysis centre functional at DH has prescribed patient-technician ratio of 3:1 and less than half of such centres have

Figure 2.5: Proportion of Dialysis Centres which have Patient-Technician and Patient-Nurse ratio of ≤ 3.0



prescribed patient-nurse ratio. Higher proportion of 'In-House' mode dialysis centres have prescribed patient-nurse

ratio than patient-technician ratio. It was observed that despite high case load on the PPP mode dialysis centre, less than one-third of such centres have prescribed patient-nurse ratio.

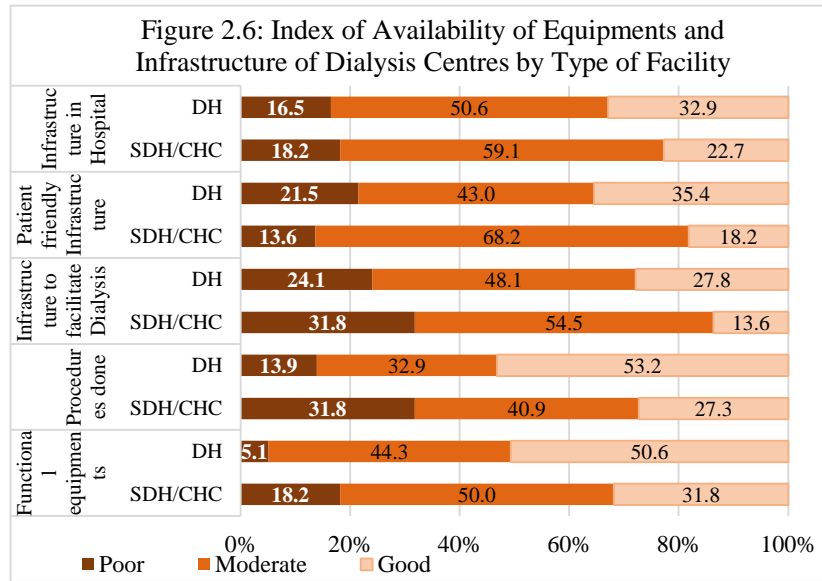
2.7 Infrastructure Availability Index:

In order to comprehend the overall level of functioning of dialysis centre based on availability of functional equipments, procedures, infrastructure, patient related infrastructure and support infrastructure index have been computed based on availability of all these parameters and dialysis centres are categorized as poor, average and good.

Figure 2.6 shows the proportion of dialysis centres in different Indices and according to the health facility type. It is evident that dialysis centres functioning at district hospitals are better equipped compared to the dialysis centres at SDH/CHC as one expects. Nearly half of the centres at DH and one-third at SDH/CHC can be rated as 'Good' in availability of functional equipments and procedures done. Similarly, about one-third of centres at DH and one-fifth dialysis centres at SDH/CHC were 'Good' in availability of patient friendly infrastructure and support infrastructure that is available outside the dialysis unit.

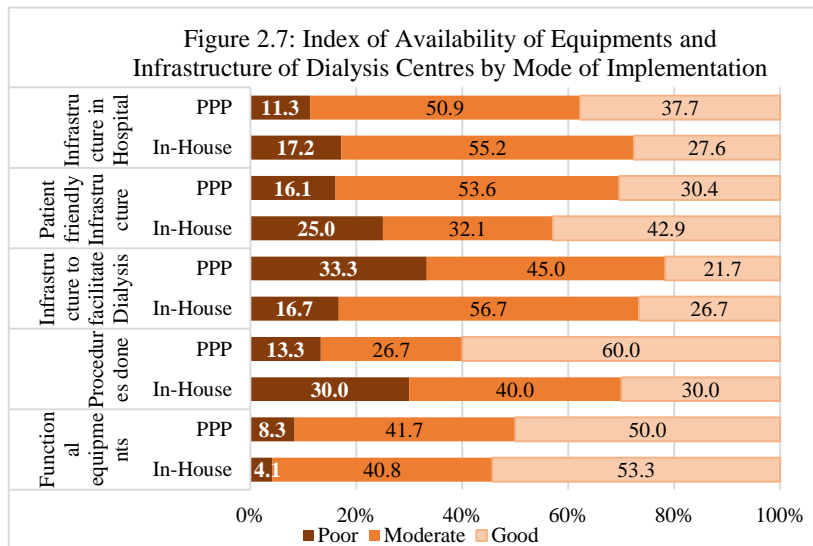
Nearly one-third of SDH/CHC based dialysis centres and one-fifth of DH based dialysis centres

were 'Poor' in procedures done and availability of infrastructure to facilitate dialysis services. In aggregate, nearly two-thirds of dialysis centres functioning at district hospitals



and three-fourths functioning at SDH/CHC need infrastructure revamp at the earliest to ensure the quality and sustaining the dialysis services under the PMNDP.

Further, disaggregation of the functionality of dialysis centres based on indices according to the mode of implementation revealed that majority of dialysis centres functioning under 'In-House' mode were 'Good'. Figure 2.7 shows that half of the



dialysis centres under 'In-House' and 'PPP' mode were 'Good' in availability of functional equipments. While 60 percent of centres under 'PPP' mode were

'Good' at procedures followed, only one-third dialysis centres were 'Good' in following dialysis procedures functioning under 'In-House' mode. Nearly half of the dialysis centres were 'Moderate' in availability of support infrastructure outside the dialysis unit in both the 'PPP' and 'In-house' mode.

Conclusion

- Overall the access to free dialysis at the numerous centres in each State itself is a blessing to those suffering from kidney diseases.
- Dialysis centres functioning under ‘PPP’ mode need to further strengthen the availability of infrastructure to facilitate dialysis process as the private agencies who provide support differ from State to State. Patient friendly infrastructure availability and adequacy is good but need further strengthening to suit the needs of the patients in a still better way.
- Dialysis centres functioning under ‘In-House’ mode need more systemic support for training of staff in following the prescribed dialysis procedure as most of the centres deploy staff on internal arrangement who keep changing which necessitates provision of regular manpower.
- Most of the infrastructure at dialysis centres operational on In-house mode to facilitate dialysis and also the support infrastructure are shared with the infrastructure available in the parent health facility where they are located. So any non-availability in the DH/SDH has a direct impact in the functioning of the dialysis centre.
- It is pertinent to mention that both the ‘PPP’ and ‘In-House’ mode dialysis centres need adequate supervision and monitoring to sustain the infrastructure created for affordable dialysis services at public health facility.
- Authorities should also be sensitized about the growing need for dialysis services among the under-privileged groups. Kerala is a good example in this regard functioning in State run In-house mode where the LSGD plays an important role in providing the necessary infrastructure support by raising project funds to meet the needs of the centre.
- Growing incidence of non-curable life style morbidity such as chronic kidney disease (CKD) demands more inputs in the form of additional manpower support, infrastructure support to run the dialysis centres as per guidelines for further improving the services under PMNDP programme.

Patient Perspective

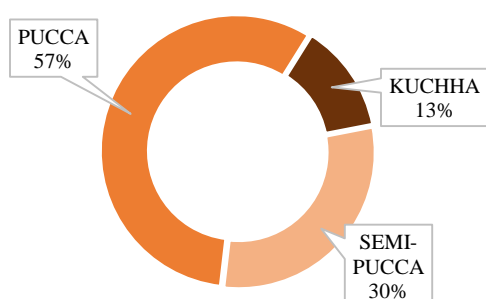
3. Household Characteristics

In this section, we explore the household characteristics of surveyed Dialysis patients utilizing services under Prime Ministers National Dialysis Programme. An understanding of the background profile of the patients is important in the programme perspective as the PMNDP is basically rolled out for providing free access to dialysis to the population below the poverty line so as to reduce their catastrophic expenditure on treatment of end stage kidney disease. Here the study includes only basic and minimum household characteristics that can probably explain the background profile to keep in line with ethical considerations to be followed in patient interviews.

Health and health care utilization is determined by a host of factors and household level factors is one among them. The household environment is also one of the primary factors that influence an individual's behaviour and attitudes. It includes religion, caste, primary source of income, type of family, its size and housing characteristics such as type of house, ownership of house and owning any agricultural land.

Housing: The State wise distribution of the respondents by household characteristics is presented in Table 3.1a and 3.1b. Economic status of an individual is indicated by various socio-economic conditions and type of house is one of them. Here more than

Figure 3.1: Type of House

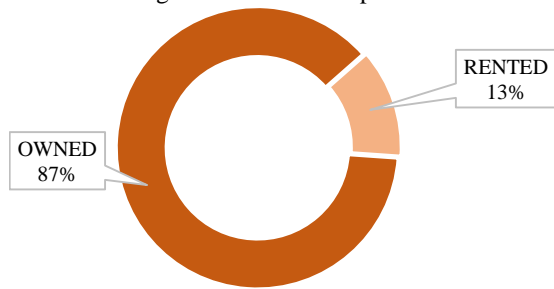


one half (57 percent) of the dialysis patients are living in pucca houses, almost 30 percent in semi pucca houses and 13 percent are living in kuchha houses (Figure 3.1). Although distribution of respondents by type of house does not vary much between

States, higher proportion of respondents from Bihar (44 percent) live in kuchha houses and more than one-half of respondents in Assam, Tamil Nadu and Andhra Pradesh live in semi pucca houses. More than three fourth of the patients from Delhi, Kerala, Haryana, Rajasthan, Telangana and Punjab live in pucca houses.

Large majority of the dialysis patients (86 percent) are living in houses which are

Figure 3.2: Ownership of House

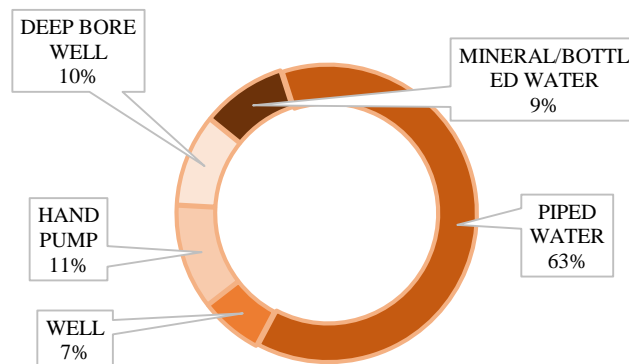


owned by them and 12 percent are living in rented houses. Delhi has the highest proportion of respondents living in rented houses (33 percent), followed by Telangana (26 percent) and Karnataka (18 percent).

Source of drinking water: Availability of safe drinking water is essential especially for kidney patients.

Information collected regarding the main source of drinking water (Table 3.1a and 3.1b) shows that almost all the surveyed households with a dialysis patient have access to improved source of drinking water which

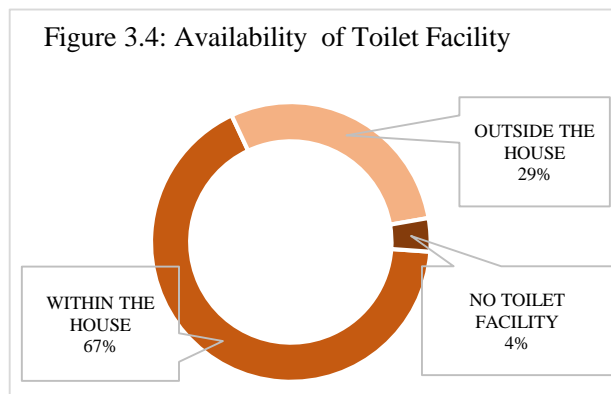
Figure 3.3: Source of Drinking Water



includes piped water, mineral water, tube wells, bore well and hand pump. Piped water is the main source for more than 75 percent of households in Haryana, Himachal Pradesh, Andhra Pradesh, Gujarat, Tamil Nadu, J&K and Rajasthan while well, hand pump or deep bore well is the main source of drinking water for more than 60 percent of households in Assam, Bihar and Kerala.

Toilet facility: Availability of toilet facility within the household provides greater

Figure 3.4: Availability of Toilet Facility

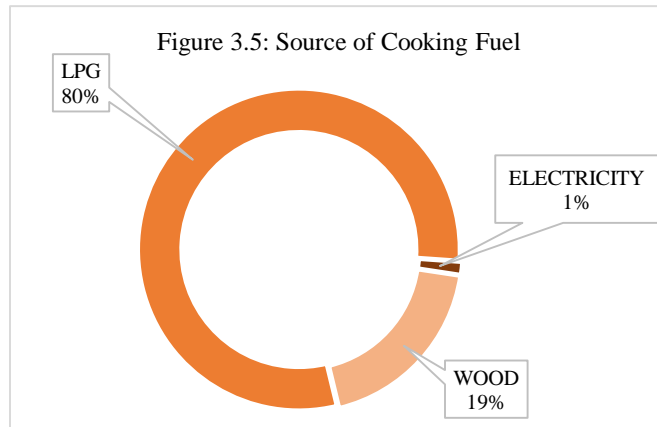


comfort to patients on dialysis. Toilet facility is generally available in almost all the contacted households as only less than 5% of the households do not have a toilet facility. Almost two-third of the contacted dialysis patients reported that the toilet facility is within the

house and 29 percent mentioned it is available outside the house. Interstate variations

by availability of toilet facility is absent, however 10-14 percent of the households in Tamil Nadu, Maharashtra and Andhra Pradesh do not have a toilet facility. The toilet facility is within the house for more than 90 percent of the households in case of Delhi, Bihar, Haryana, Punjab and Rajasthan.

Cooking fuel: Exposure to smoke inside the home, either from cooking with solid fuels or smoking tobacco has potentially harmful health effects on patients on ESRD.



Almost 81 percent of the dialysis patients live in households who use clean fuels for cooking and 19 percent use some type of solid fuel for cooking, with virtually all being wood. There are few states where more than 90 percent of

the households use LPG for cooking and these include Delhi, Assam, Andhra Pradesh, Telangana, Tamil Nadu and Punjab. But more than one-third households in Madhya Pradesh, Himachal Pradesh, J&K and Kerala use mainly wood for cooking.

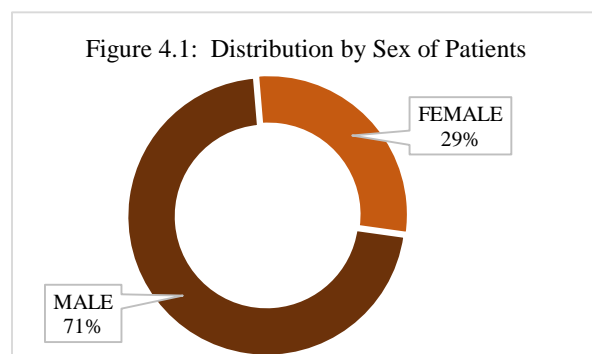
Household size: The mean household size is an important indicator of household crowding (Table 3.1a and 3.1b). On an average the household size is 5.28. However, the mean household size in the present study ranges between 6 and 6.4 in Bihar, Uttar Pradesh, Punjab, Rajasthan and Jammu and Kashmir. It ranges from 4-5 in the states of Assam, Andhra Pradesh, Telangana, Gujarat, Tamil Nadu and Kerala.

Overall the study finds the households of the kidney disease patients to be having reasonably good housing conditions, better access to safe drinking water, majority to be having toilet facility within the household and using safe fuel for cooking which is basically the impact of various national level programmes to improve the standard of living of the population which again is of a vital importance in maintaining good health among the patients.

4. Individual Characteristics

At the individual level, demographic characteristics e.g., age, sex, religion/ethnicity, marital status, socioeconomic characteristics (e.g., education and employment status) plays a crucial role in determining the health and health care utilization. This section presents information on the demographic and socioeconomic characteristics of the surveyed kidney patients such as sex, age, marital status, education, current work status and income category of the kidney patients base as presented in Tables 4.1a, 4.1b, 4.1c and 4.1d in Appendix II. This information is useful for understanding the factors that affect utilization of dialysis services through PMNDP services and related health behaviours.

Sex: As already mentioned that information was collected from a total of 1944 dialysis beneficiaries. These include 1390 (71 percent) male and 554 (29 percent) female patients. The proportion of men outnumber women in each and every state. For



example, the proportion of male dialysis patients is more than 70 percent in 10 States (Bihar, Andhra Pradesh, Haryana, Kerala, Karnataka, Tamil Nadu, Rajasthan, Gujarat, Maharashtra and, Punjab). In the remaining states also the proportion

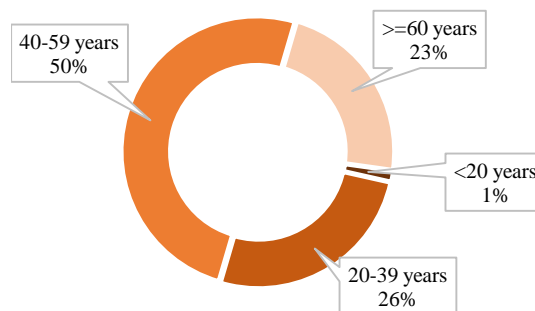
of male dialysis patients ranges between 60-70 percent. Although the PRC teams did not interview on the basis of gender but all patients attending the dialysis centre were interviewed but higher proportion of male dialysis patients utilizing the dialysis services indicates perhaps that the prevalence of Kidney problem is higher among men as compared to women.

Research based evidence over the years had arrived at similar results of increased chances of end stage kidney disease (ESRD) among men than women. The incidence of (ESRD) was shown to be 50 percent higher in adult men than in women (Albertus et. al., 2016), prevalence of CKD in females had not varied in the past 30 years from 13.7 percent versus 9.8 percent in 1988–1994 to 15.4 percent versus 12.8 percent in

2011–2012 (Murphy et. al., 2016) and premenopausal women were shown to be having a lower incidence of CKD and a slower progression while other studies postulated the observed sex differential to health behaviors as well as the effects of sex hormones with estrogen playing a protective effect among women (Ricardo et.al, 2019).

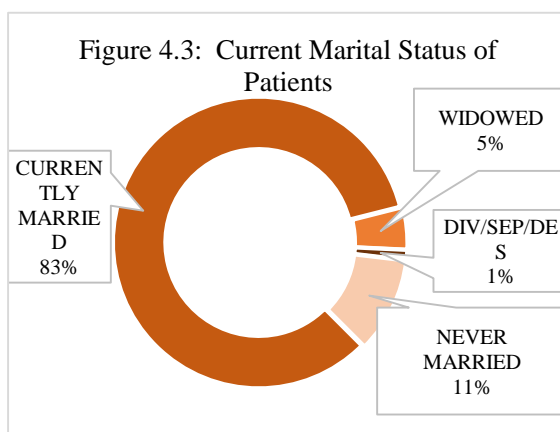
Current Age: The prevalence of Non Communicable Diseases generally increases with age. Although kidney disease can develop at any time, chronic kidneys diseases increases with age. The age distribution of the dialysis patients reveal that almost one quarter of the interviewed patients were aged 20-39 years and another one-half are 40-59 years old. Further 23 percent are 60 years or more. The percentage of patients age less than 20 years is almost one percent. Almost 30 percent of the beneficiaries are age 60 years and above in Karnataka, HP, J&K and Kerala. Roughly one-third of the dialysis beneficiaries in Delhi, UP, Haryana, MP and Telangana are age 20-39 years.

Figure 4.2: Age Distribution of Patients



The current mean age of the patients is 52 years. The mean age is highest (53.8 years) in case of Kerala followed by HP (51.2 years) and Maharashtra (50.4 years). It is lowest in MP (44.6), followed by Delhi and UP (Tables 4.1a & 4.1b).

Marital Status: The distribution of respondents by marital status shows that 83 percent

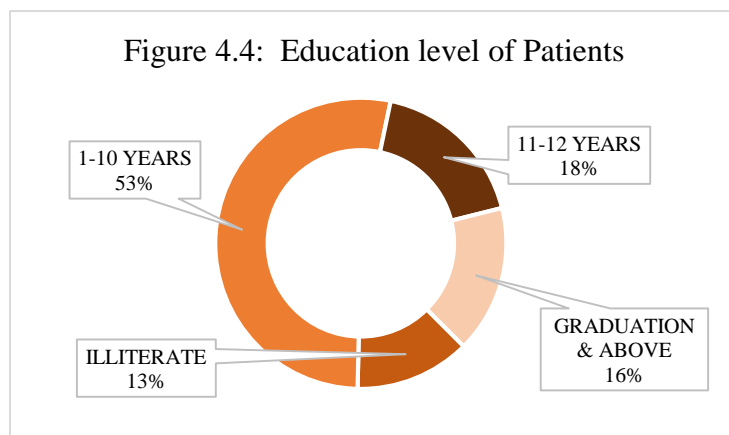


of them are currently married and about 11 percent are never married. Although there are not much significant variations by marital status among various States included in the study, nonetheless, Andhra Pradesh and Assam has the highest proportion (90-95 percent) of currently married

respondents and proportion of never married respondents is highest in UP and Punjab

(18 percent). Similarly, Karnataka has the highest percentage of widowed respondents (11 percent).

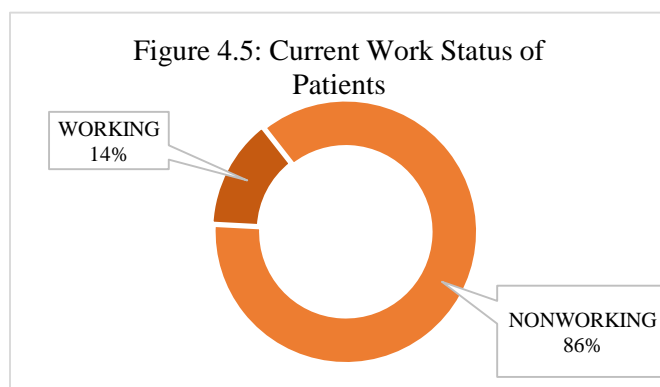
Education: The distribution of beneficiaries by their level of education has been portrayed according to surveyed States and mode of implementation of dialysis programme and is presented in Tables 4.1a and 4.1b. Overall, results show that 13



percent of the respondents are illiterate or have no formal schooling and about one-half have schooling up to 1-10 standard (53 percent) 18 percent have 11-12 years of education and another

16 percent have at least completed graduation. State level variation by education level of beneficiaries is clearly evident from the analysis. In J&K a higher proportion of illiterate beneficiaries is observed. Whereas, several States have relatively better educational level i.e. graduation and above depicted for the States of Himachal Pradesh (32 percent), Karnataka (31 percent) and Haryana (24 percent).

Work Status: The distribution of respondent's current work status shows that large majority of them (66 percent) are not currently working (Table 4.1c and 4.1d). As

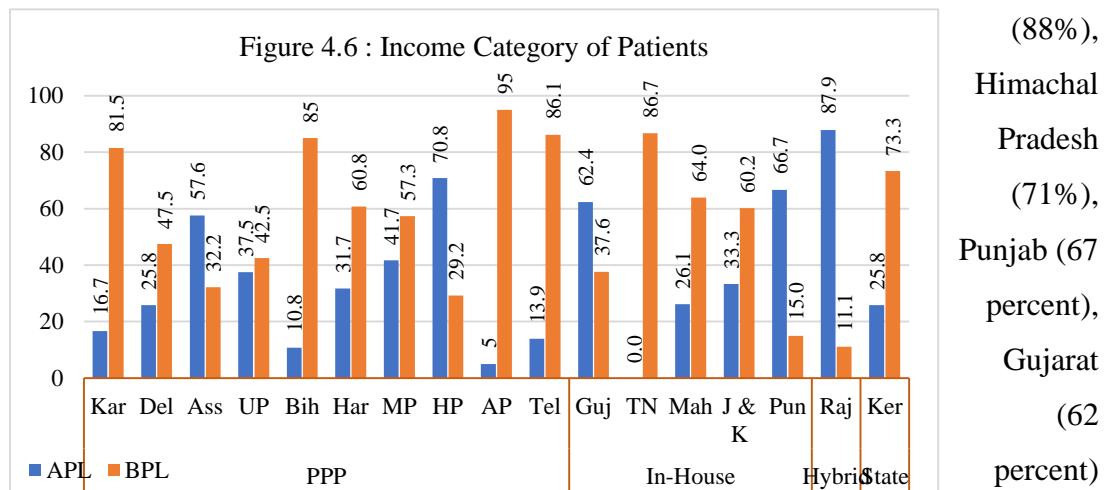


large majority of respondents are not working, so there are virtually no State level variation by current work status with a few exceptions. Assam has the highest percentage of respondents who are working

(41 percent), followed by Himachal Pradesh (30 percent) and Maharashtra (26 percent). Among those who are currently working, one-fourth are engaged in business/managerial activities and another 23 percent are skilled workers. Unskilled workers account for 19 percent of working respondents. Almost 8-9 percent each is working as sales/clerical jobs, house work and professional services. There are also a

few students mainly from Delhi and Maharashtra who at a young age is on dialysis treatment. Karnataka has the highest percentage of unskilled workers (60 percent), Bihar has the highest percentage of Skilled Workers (56 percent), Rajasthan has the highest proportion of Business/Managerial respondents (58 percent) and Kerala has highest proportion of professional workers (23 percent).

Income: Information was also collected regarding the income category of the dialysis beneficiaries (Table 4.1c and 4.1d). According to the findings, most of the respondents, particularly from Andhra Pradesh (95 percent), Tamil Nadu (87 percent), Telangana (86 percent), Bihar (85 percent) Karnataka (81 percent) and Kerala (73 percent) are from BPL category. A higher proportion of respondents from Rajasthan



and Assam (58 percent) are from APL category. Notably Anthyoda beneficiaries also account for almost 10-20 percent of respondents in UP (19 percent). Punjab (18 percent), Tamil Nadu (13 percent) and Assam (10 percent).

So the assessment of individual characteristics raises some concerns on the one end and appear to have achieved the programme goal on the other end. What we mean by concern is the higher proportion of young adults among the patients, the lower limit of age of patients on dialysis being less than 20 years and the gender differentials showing male-female patient ratio on dialysis of 3:1 the causes for which need to be perhaps explored through clinical research studies.

Yet another observation is the disproportionate burden of kidney disease among the non-working group and majority hailing from the below poverty line group. In this regard, in the programme perspective, the implementation of PMNDP has achieved

its target of reaching the poorer sections of the society as envisioned. Also of great importance is that the patients from the above poverty line group are also being covered under the programme which should reduce the household catastrophic expenditure on treatment considerably.

Behavioural Characteristics

Alcohol consumption: Harmful use of alcohol is primarily associated with its caustic effects on the digestive, brain, and cardiovascular systems. Our study found that 24 percent of respondents ever consumed alcohol. Drinking alcohol is more common among patients in Tamil Nadu (46 percent), Telangana (41 percent), HP (37 percent), Kerala (36 percent) and Delhi (33) and it is lowest in UP, Bihar and J&K (Table 4.2a & 4.2b).

Tobacco consumption: Tobacco use is a primary risk factor for a number of chronic diseases, including cancer, lung disease, cardiovascular disease, and kidney problems. Overall, 20 percent of our respondents reported that they are currently using tobacco in either smoked or smokeless form, ranging from 36 percent in Assam to 7 percent in Haryana. Smoking is also higher in the states of Kerala (32 percent), Himachal Pradesh (25 percent) and Delhi (24 percent), Rajasthan (24 percent) and Andhra Pradesh (22 percent) (Table 4.2a & 4.2b).

5. Morbidity

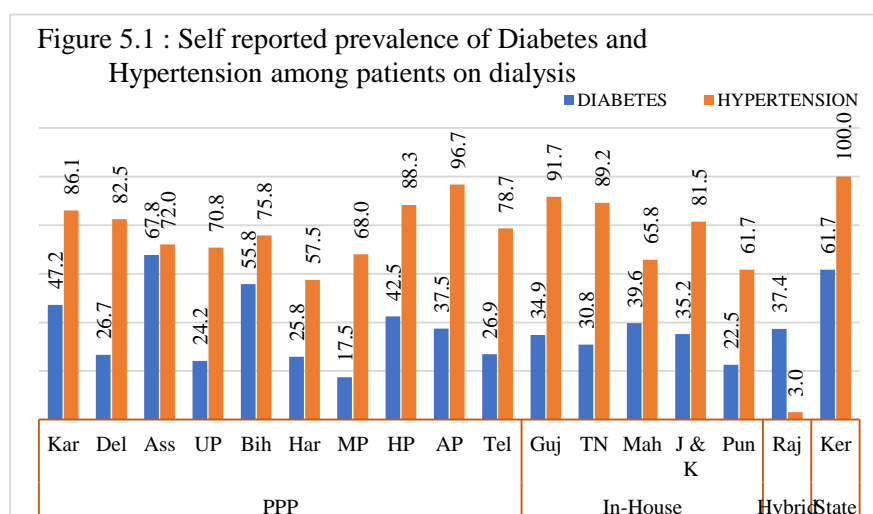
The assessment of the burden of chronic health conditions such as cardiovascular diseases, diabetes, chronic respiratory diseases and cancers, as well as their risk factors, are important for promoting appropriate and effective health care policies for the prevention and control of non communicable diseases (NCDs). This section presents information about various chronic health conditions self reported by the patients availing dialysis services (Tables 5.11 & 5.1b).

Self reported Morbidity

Hypertension was the major health issue reported by almost three fourth of kidney patients in the selected States. This was followed by diabetes which was reported by 37 percent of the respondents. Sixteen percent of the respondents mentioned that they are suffering from breathlessness/Ashtma and 12 percent reported urinary tract infections. Cardiovascular diseases and renal stones were reported by 9 percent each. Other self reported health problems reported by the respondents were COVID-19 (7 percent), liver diseases (6 percent), jaundice (3 percent) and Tuberculosis (2 percent).

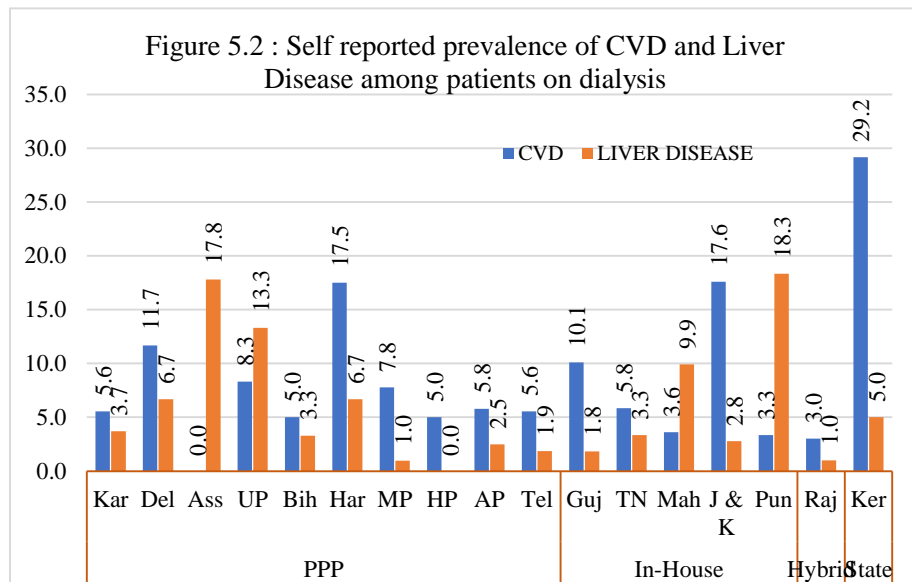
More than a 90 percent of dialysis patients in the States of Andhra Pradesh (97 percent) Gujarat (92 percent) reported that they have hypertension

(Tables 5.1a & 5.1b). All the patients in Kerala reported hypertension Rajasthan is the only State which has reported



very low prevalence of hypertension among Dialysis patients. More than a

half of the dialysis patients reported that they have been diagnosed with diabetes in the demographically advanced state of Kerala (62 percent), Bihar (56 percent) and Assam (68 percent). There are 5 States where a quarter of dialysis patients have self reported diabetes. These are Delhi (27 percent), UP (24 percent), Haryana (25 percent), Telangana (27 percent) and Punjab (23 percent). Cardiovascular diseases are more common in

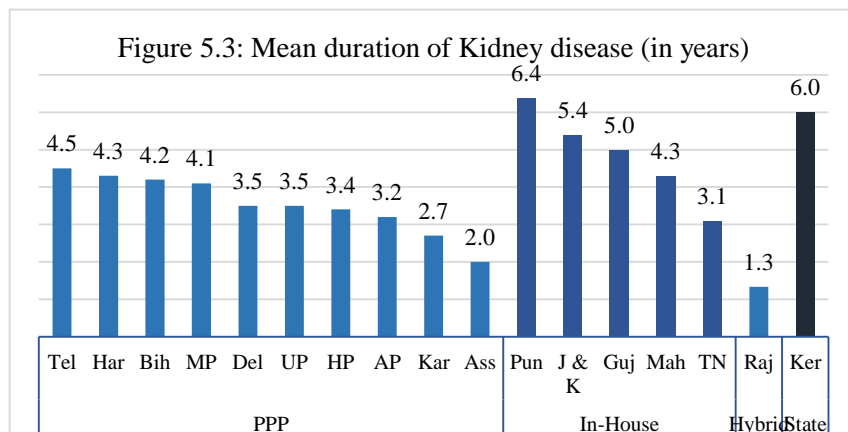


Kerala (29 percent), Haryana and J&K (18 percent) as compared to other states. Punjab and

Assam have the highest reported prevalence of liver disease (18 percent). Telangana has the highest reported prevalence of renal diseases (41 percent), breathlessness/Asthma (43 percent) and Covid 19 (42 percent). Andhra Pradesh has also reported highest morbidities of Urinary Tract Infection (32 percent), Tuberculosis and Jaundice (7 percent each).

Duration of Kidney Disease

Duration of the kidney disease is one of the important conditions for determining the progression of kidney diseases. Early detection may help



prevent kidney diseases from progression to kidney failure. Recognition of a rapidly progressive process versus

stable disease permits early intervention to curtail an active process and to preserve residual kidney function. Information was collected from the dialysis patients about the duration of the kidney diseases (Tables 5.2a & 5.2b). It was found that the mean duration of the kidney diseases of a dialysis patient was 3.9 years. Mean duration of patients on kidney disease is, in general higher in most of the States in the group of States where patients avail dialysis service under In-house mode than the group of states classified under PPP mode of implementation. The mean duration of kidney diseases was more than 5 years in the States of Punjab (6.4 years), Kerala (6.0 years) and J&K (5.4 years). The mean duration was less than 3 years in Assam (2 years) Karnataka (2.7 years) and Rajasthan (1.3). So the patients are observed to be suffering for long durations and the access to dialysis services under PMNDP is a blessing to such patients.

Nephrologist Consultation

A Nephrologist is a medical doctor who specializes in diagnosing and treating kidney conditions. Several studies have suggested improved outcomes for patients with chronic kidney diseases who consult a Nephrologists in time. Therefore it is necessary that one should immediately see Nephrologists if he has any signs of kidney diseases or other conditions that may damage the kidneys. The present study found that six percent of the patients have never consulted Nephrologists (Tables 5.2a & 5.2b). Large majority of the dialysis patients (57 percent) have consulted a Nephrologists from a private sector and 29 percent have visited a Nephrologists from a Public sector and 8 percent have visited both a public as well as a private health facility for Nephrologists consultation. Most of these patients who have never consulted Nephrologists are from Delhi, UP Bihar and Maharashtra. The proportion of patients availing dialysis services from a PPP mode Dialysis facility are more likely to consult a Nephrologists from a private Sector as are patients utilizing the services from a dialysis centre run in in-house mode. In a few states like Bihar, Tamil Nadu, AP, Telangana and MP more than 70 percent of the dialysis patients have consulted a Nephrologists from a private sector. Public health facility is the leading source of Nephrologists consultation in case of Himachal Pradesh

(68 percent), J&K (49 percent), Kerala (48 percent) and Delhi (46 percent). Significant proportion of respondents from (Rajasthan (38 percent), Gujarat (21 percent), and Haryana (19 percent) visited both a public and private health facility for a Nephrologists consultation.

Those respondents who had consulted Nephrologists were further asked whether this consultation was before or after the diagnosis of the disease (Table 5.2a & 5.2b). It was found that roughly four-fifth of the patients had consulted a Nephrologists before the diagnosis of kidney failure and remaining (62 percent) had consulted after the diagnosis of kidney disease. Interstate variation in the timing of Nephrologists consultation reveal that more than 75 percent of the patients in Rajasthan (84 percent) and Bihar (80 percent) and J&K (79 percent), have consulted a Nephrologists before diagnosis of kidney disease. On the other hand very high proportion of patients in Tamil Nadu and Himachal Pradesh (100 percent), Maharashtra (90 percent), Karnataka (88 percent) and Gujarat (87 percent) have sought the Nephrologists opinion after the diagnosis of disease. Once the kidney disease was diagnosed in case of the patients who had visited a Nephrologist after diagnosis of kidney diseases, the Nephrologist consultation was not delayed as 80 percent of them had consulted a Nephrologist within a month of diagnosis. The delay in seeking Nephrologist opinion was generally observed in like Delhi, AP, Telangana, Assam, Bihar and Haryana. These are the States which are implementing the Dialysis services in PPP mode.

From the programme implementation point of view, it is very important to know as to why the patients with a kidney problem delay in seeking from the opinion of a Nephrologist. Therefore, an attempt was made to collect information about the reasons for delay in seeking Nephrologists opinion from those respondents who visited a Nephrologist after one month of diagnosis of kidney problem. It was found that 40 percent of such patients expressed that they were not advised by anyone to consult a Nephrologist and 28 percent mentioned that due to the long distance they could not visit a Nephrologist despite the fact they were advised to do so. Almost a quarter

(24 percent) could not afford financial cost of Nephrologist consultation and 12 percent mentioned that there was no facility of Nephrologist consultation. Patients who are availing the dialysis services are more like to have delayed the Nephrologist consultation in Delhi, AP (100 percent), Delhi, UP (35 percent) and Karnataka (27 percent). These are the states which are running the programme in PPP mode. Large majority of such respondents from Himachal Pradesh (72 percent) cited distance as an obstacle in seeking timely consultation and financial constraints were the main reason for most patients in the southern States of Tamil Nadu, Kerala and AP and North Eastern State of Assam.

Symptoms of Kidney Disease

Prevention being better than cure is a widespread ideology in medicine, however, this notion is considered to be more effective if symptoms of kidney diseases are identified at the earliest. Studies have found that identification of symptom early and their screening results in early detection of chronic kidney disease and produce better health outcomes as both patients and caregivers can actively use tools and knowledge to decelerate progression to end-stages and improve outcomes (exposure to Importance of Early Detection for Kidney Disease URL: <https://www.news-medical.net/health/Importance-of-Early-Detection-for-Kidney-Disease.aspx>).

All the respondents in the present study were asked to report the various symptoms present at the onset of the kidney disease and the State wise variations classified by mode of implementation of PMNDP are presented in Table 5.3a & 5.3b. It was found that seven percent of the respondents had no symptoms at the time of onset of kidney related issue. The most frequent symptoms reported by the patients were swelling of limbs (57 percent), vomiting (47 percent), fatigue (42 percent) and swollen face (40 percent). One quarter of the respondents also mentioned that they experienced anaemia (27 percent), stomach upsets (25). Other symptoms experienced by the respondents were Allergy/itching (18 percent), change of taste (17 percent), frequent urination (15 percent) and other urine issues (14 percent).

There is not much variation in the symptoms between the patients utilizing dialysis from in-house and PPP mode, however, swelling of hand/legs as a symptom was

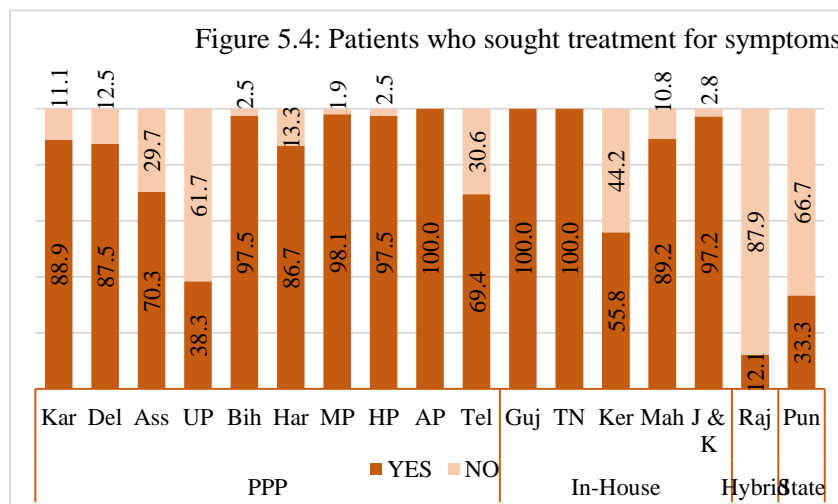
reported more (60 percent) reported as compared to in house mode. On the other hand around half of patients utilizing services from in house mode experienced fatigue as compared to one-third of patients receiving services from PPP mode (Table 5.3a & 5.3b).

As the experience of symptoms is very high there are virtually not much variations in the States except Punjab and Rajasthan. The percentage of respondents mentioned to have experienced some symptoms is 56 percent in Punjab and 79 percent in Rajasthan. Almost all the patients from Tamil Nadu, Assam, Kerala and Himachal Pradesh have experienced at least one symptom before onset of kidney problem. Further analysis of symptoms experienced by respondents shows that patients from Himachal Pradesh, Kerala, Delhi and Karnataka have experienced these symptoms more often as compared to other States.

Treatment Seeking Behaviour

The health status of a population is reflected in the levels of morbidity and treatment seeking behaviour of its members. Lack of timely health checkups can delay the identification of the actual health complications and the initiation of appropriate care and treatment. Our study found that more than three quarter of respondents (78 percent) who

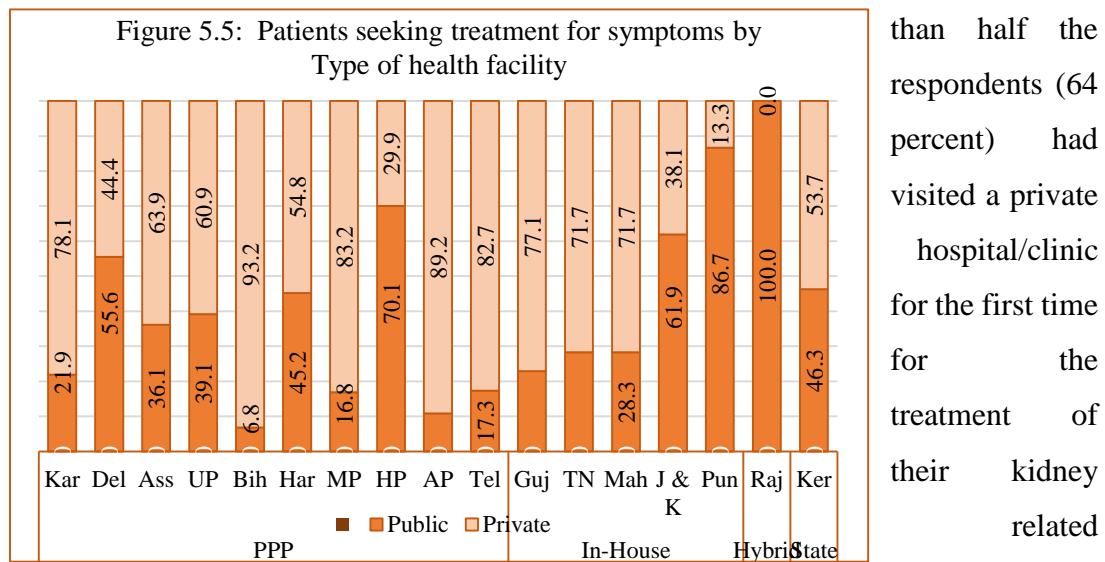
had experienced any symptoms related to kidney problem had actually sought treatment for these symptoms. The percentage of respondents



mentioned to have sought treatment for symptoms ranges from more than 90 percent in the States of Bihar, Maharashtra, Haryana, Madhya Pradesh, Himachal Pradesh, J & K, Andhra Pradesh. Tamil Nadu and Karnataka to less than 40 percent in UP, Rajasthan and Punjab. In fact all the respondents from Gujarat, Tamil Nadu and Andhra Pradesh had sought treatment for kidney related symptoms (Table 5.4a and

5.4b). There is absolutely no difference in treatment seeking behaviour for kidney related symptoms between patients who are utilizing dialysis through PPP or in house mode however, Kerala where the dialysis services are provided by the State about 44 percent of the patients with kidney related symptoms have not sought treatment for these symptoms.

Treatment of symptoms from an appropriate health facility can help in proper identification of the health problem and its timely treatment. All the patients who had any kidney related health issues were asked to mention as to which health facility did they visit for the first time for seeking treatment of their symptoms and the information is presented in (Table 5.4a and 5.4b). This information reveals that more



than half the respondents (64 percent) had visited a private hospital/clinic for the first time for the treatment of their kidney related

symptoms and only 30 percent have visited a public health facility. There are not much differences in the place of first contact by mode of implementation of dialysis programme except that slightly higher proportion of respondents utilizing the dialysis from a PPP mode facility have visited a private clinic/doctor for the first time as compared to patients utilizing dialysis services from an in house mode facility.

The percentage of respondents visiting a private health facility for the first time is very high in the States of Andhra Pradesh (88 percent), Telangana (79 percent), Bihar (75 percent), Karnataka (71 percent), Madhya Pradesh and Maharashtra (69 percent), Tamil Nadu (67 percent), Assam (64 percent) Gujarat (61 percent). Public Sector health facilities like District or Municipal Hospital is the first choice for large majority of patients in Punjab (59 percent), J&K (57 percent) and Delhi (45 percent). Two-third of the patients in Rajasthan has visited a CHC for the first time for the resolution of their kidney related symptoms.

Reasons for Not Seeking Treatment

Although respondents gave a host of reasons for not seeking treatment for their kidney related symptoms but almost two third (65 percent) mentioned that they took the symptoms lightly as they were not initially so severe. This clearly indicates that people in general are not aware about the early symptoms of chronic kidney diseases.

Table 5.1: Reasons for not seeking treatment at the onset of Kidney Disease

	State	ILLNESS NOT SEVERE	NO TRANSPORT FACILITY	FINANCIAL CONSTRAINTS	DIDNOT WANT TO KEEP AWAY FROM WORK	NO ONE TO ACCOMPANY	AFRAID OF COVID INFECTION	OTHERS	Total No. of Patients not seeking treatment
PPP	Karnataka	37.5	16.7	70.8	4.2	12.5	0.0	4.2	24
	Delhi	32.6	4.3	54.3	2.2	8.7	8.7	6.5	46
	Assam	80.9	0.0	58.8	0.0	0.0	25.0	0.0	68
	UP	54.1	17.6	32.1	6.0	3.6	3.6	1.2	84
	Bihar	60.0	0.0	33.3	0.0	11.1	0.0	0.0	9
	Haryana	47.5	15.4	41.0	17.9	10.3	17.9	5.1	39
	MP	50.0	8.3	8.3	16.7	0.0	8.3	69.2	13
	HP	78.9	5.3	21.1	0.0	0.0	10.5	0.0	19
	AP	77.8	11.1	16.7	5.6	0.0	16.7	5.6	18
	Telangana	68.1	2.1	25.5	0.0	2.1	0.0	2.1	47
In-House	Gujarat	83.3	0.0	33.3	0.0	0.0	16.7	0.0	6
	TN	80.0	0.0	80.0	60.0	0.0	0.0	80.0	5
	Maharashtra	24.4	6.7	66.7	17.8	15.6	6.7	0.0	45
	J & K	72.7	36.4	36.4	27.3	27.3	36.4	9.1	11
	Punjab	57.9	21.5	15.1	9.8	9.8	6.5	2.2	92
Hybrid	Rajasthan	96.6	5.7	2.3	0.0	1.1	1.1	0.0	87
State	Kerala	86.6	1.5	52.2	0.0	3.0	0.0	0.0	67

Another one third did not seek treatment for initial symptoms due to lack of financial resources. Other reasons for not seeking treatment were lack of transport (10 percent), COVID related problems (8 percent) and lack of family support to accompany to a health facility (6 percent). The percentage of respondents (Table 5.4a and 5.4b) who have taken the symptoms very lightly is very high in the States of Rajasthan (97 percent), Kerala (87 percent), Gujarat (83 percent), Assam (81 percent), Tamil Nadu (80 percent), Himachal Pradesh (79 percent), Andhra Pradesh (78 percent), J & K (73 percent), Telangana (68 percent) and Bihar (60 percent). Financial constraints to seek treatment for symptoms were mentioned by more than two-third of respondents in Tamil Nadu (80 percent), Karnataka (71 percent) and Maharashtra (67 percent). Half

of the respondents (54 percent) from Delhi also have not sought treatment for symptoms due to financial constraints.

AYUSH Treatment

Once a person is diagnosed with a kidney failure, people generally try various forms of treatment including AYUSH and traditional systems of treatment. During the last few years, AYUSH treatment is being advocated for the treatment of chronic kidney diseases. This study found that apart from undergoing dialysis, 22 percent of the patients have also ever tried AYUSH treatment and about 9 percent of them are currently also on this system of treatment (Table 5.4a and 5.4b). Significant proportion of respondents in Haryana, Madhya Pradesh, Uttar Pradesh (38 percent each), Delhi (36 percent), Assam (34 percent), Himachal Pradesh (28 percent) and Maharashtra (24 percent) have ever tried AYUSH treatment. Although very small of patients from Rajasthan have ever tried AYUSH treatment but of these very high proportion (84 percent) are continuing this treatment.

Anthropometric measurements

Patients are usually constantly monitored to understand if there is loss of weight. The BMI is measured before the first dialysis itself. So information in this regard was collected in the study too. To avoid recall lapse the study enquired whether height was measured, weight was measured and also what the doctor informed about their BMI. Only in case both height and weight was reported by patients to have been measured, the BMI question was asked. Majority of the patients report of having their weight measured but the proportion reporting that height was measured is much lesser in states like J & K, Maharashtra, MP, and Punjab. From the response on BMI measurement patients having normal BMI is much less in Assam (18 percent), and MP (21 percent) only 50 percent of the patients have normal BMI is Karnataka, 60 to 70 percent in Haryana, HP, Gujarat, Tamil Nadu and in rest of the states, proportion with normal BMI are higher.

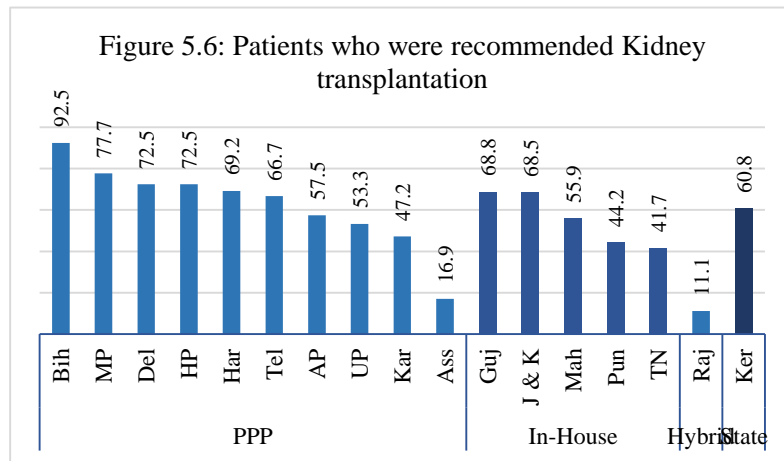
Kidney Transplantation

End stage kidney disease needs treatment to prevent life threatening consequences of the waste product build up leading to coma and death. In these situations dialysis is an option. But this is a time consuming, expensive procedure and is associated with a

myriad of side effects and risks of infection etc. Kidney transplant, if possible, is usually the preferred option because it is much less inconvenient than having dialysis. A kidney transplant may be performed regardless of age of the recipient (patient who requires the kidney) provided they have a general health status that can withstand the major operation, there is a good chance of transplant success and the person is aware and willing to comply with taking immune suppressant medications after the transplant to prevent rejection of the new organ by the body's immune system.

In the present study an effort was made to understand what proportion of patients on dialysis have been recommended by their doctors to try for a kidney transplant and how many of them have tried for a kidney transplant (Table 5.6a & 5.6b). It was found

that the doctors have recommended kidney transplant in case of 58 percent of the patients. Almost ninety percent of the patients on dialysis in Bihar have been recommended to



have a Kidney transplant. This proportion is also very high in Madhya Pradesh (78 percent), Delhi (73 percent) and Himachal Pradesh (73 percent). More than two-third of such patients in Haryana, Gujarat and J & K and Telangana (67 percent each) also reported to have been recommended a kidney transplant by a doctor.

It was found that about half of the patients who were recommended a Kidney transplant by a doctor have ever tried for a kidney transplant. The percentage of respondents who have ever tried a transplant ranges from a high of about 80 percent in Andhra Pradesh and J & K to a low of 9 percent in Rajasthan. Substantial proportion of respondents from Punjab (78 percent), Delhi (74 percent), Himachal Pradesh (70 percent), Gujarat (66 percent), Tamil Nadu (66 percent) and Telangana (60 percent) have also tried for a kidney transplant.

Difficulties faced in kidney transplantation

Of the patients who tried for a kidney transplant, 7 percent have not faced any problems in seeking kidney transplantation. However, a large majority of the patients who were recommended a transplant could not find a donor (70%) and another 63 percent could not go for transplantation due to financial constraints. It was also mentioned by 17 percent of the respondents that they do not want their family members to suffer due to donation of kidney. Thirteen percent of the respondents mentioned that even kidney replacement has side effects and another 15 percent mentioned that kidney transplantation is not a final treatment and kidney failure can recur even after replacement. Difficulties faced by respondents in getting transplant does not vary by mode of implementation by there are State wise differences in these problems. For example, all the respondents could not find a donor in Assam as compared to 40 percent in Haryana and less than 10 percent in Gujarat, Tamil Nadu and J&K. Financial problems were more frequently reported by respondents from Tamil Nadu, Andhra Pradesh, Bihar, J&K and Punjab.

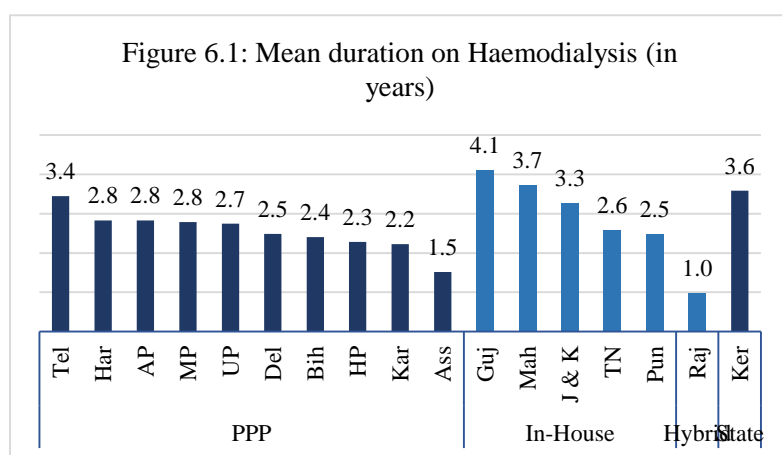
Conclusion

- The burden of multiple Co-morbidities as reported by the patients reveal the patient's suffering to a large extent. Very few patients did not experience any symptoms related to chronic kidney diseases.
- Our study found that more than three-quarters of respondents who had experienced any symptoms related to kidney problems had actually sought treatment for these symptoms. About two-third of the respondents had visited a private hospital/clinic for the first time for the treatment of their kidney-related symptoms and only 30 percent had visited a public health facility.
- People in general are not aware of the early symptoms of chronic kidney diseases as two-third of respondents who did not seek treatment for symptoms had taken these symptoms lightly.
- As kidney transplantation is one of the options of treatment, it was found that the doctors had recommended kidney transplants to two in five patients and half of the patients were recommended a kidney transplantation. But a large majority of the patients were not successful in having a kidney transplant either for not being able to find a donor or had financial constraints to do so.

6. Process Dimension

The process of registration, difficulties if any, choice of dialysis centre, dialysis schedule and convenience, frequency of dialysis, regularity in taking medicines, and difficulty in getting medicines are dealt with in this section.

To highlight the burden of kidney disease in the country, the mean duration since first haemodialysis until the period of survey was examined (Table 6.1a & 6.1B). Here the



mean duration on haemodialysis is compared between the group of States where the present study sample of patients avail dialysis service under different modes of implementation of

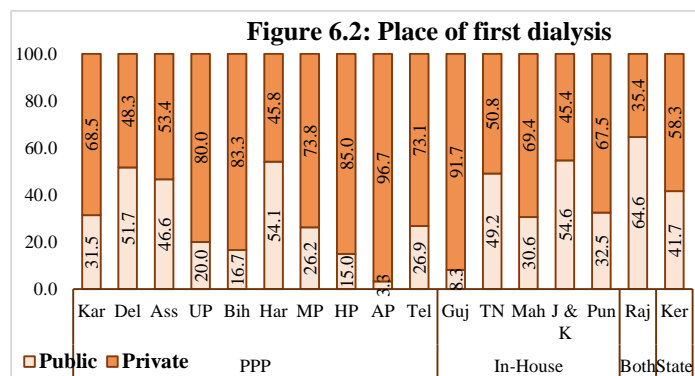
PMNDP. The range of variation is between 1.5 years in Assam and 3.4 years in Telangana among group of States where dialysis centres are operational under PPP mode whereas the range is between 2.5 years in Punjab and 4.1 years in Gujarat operational under in-house mode. In Rajasthan (hybrid mode) the mean duration of patients on haemodialysis is 1 year and in Kerala (State run in-house mode) it is 3.6 years.

The number of dialysis (during the period during the period since first haemodialysis and date of survey) varies by each patients depending upon severity of the disease the most frequent schedule being thrice a week. So if the mean number of dialysis in these States are analysed it is highest in Telangana (412 dialysis per patient under study) followed by AP (335), Haryana (301) and least in Assam (129) among the first group of States. Among the second group of States is highest in Gujarat (507) and least in Punjab (140). These findings reflect the massive burden of CKD among the population and the importance of PMNDP in extending dialysis services at either free

(BPL) or affordable rates (APL) saving many lives and reducing impoverishment on account of OOPE on treatment.

Patient responses to any difficulty in registration process indicate that very few patients had faced difficulty. Around 20 percent of the patients in Delhi and Bihar reported difficulty in registration mostly due to the time required to make the documents required for registration, non availability of bed, some felt the process to be long, while others had to wait for completing the registration.

PMNDP services extend free dialysis to patients in BPL category. The study enquired the first place of dialysis of the patients to understand the shift from private to public facility for dialysis. The utilization of private health facilities were found to be quite higher among the patients presently availing services under PMNDP in the public health facilities in each of the 17 States (Table 6.2a & 6.2b).



- There has been massive shift from private to public health facility with the implementation of PMNDP programme as indicated by the health facility where the patient underwent dialysis for the first time (Table 6.1a & 6.1b). In AP the first dialysis was at private hospital among 97 percent of the patients. UP, Bihar, HP, MP, Telangana, Maharashtra, Karnataka, Punjab shows notable shift of around 70 percent from private to public hospitals with access to free dialysis under PMNDP. The State run in-house mode in Kerala too offers free dialysis services to BPL patients and 58 percent of the patients received the first dialysis from a private facility.
- An understanding of the change in dialysis centre and the frequency of change indicate that in most of the States the patients had changed the dialysis centre mostly once with exceptions of MP where around 80 percent of the patients had changed dialysis centres 2 or more times and similar observations are notable in Delhi, Maharashtra, Kerala, J & K also (Table 6.2a & 6.2b).

Table 6.1: Reason for change in dialysis centre from Private health facility

	State	Not Affordable	Distant from Residence	Inconvenient time of dialysis sessions	Lack of transportation	Long waiting time for dialysis	Lack of Staff Cooperation	Lack of proper facilities	Cannot claim insurance benefits	Others	Total
PPP	Karnataka	79	85	52	37	24	6	10	1	2	108
	Delhi	67.9	45.5	17.9	20.5	17.0	8.9	20.5	1.8	4.5	120
	Assam	64.4	96.2	1.9	9.6	29.8	0.0	1.0	1.0	0.0	118
	UP	88.3	70.2	24.5	27.7	18.1	3.2	8.5	3.2	1.1	120
	Bihar	94.3	76.2	0.0	6.7	0.0	1.0	1.9	1.0	0.0	120
	Haryana	84.3	55.7	10.0	25.7	14.3	1.4	2.9	0.0	4.3	120
	MP	72.0	82.0	2.0	5.0	5.0	2.0	8.0	7.0	19.0	103
	HP	55.1	95.9	10.2	17.3	9.2	5.1	7.1	9.2	2.0	120
	AP	92.3	77.8	23.9	4.3	0.9	0.0	0.9	0.9	0.0	120
	Telangana	58.2	68.4	22.4	34.7	7.1	7.1	9.2	0.0	3.1	108
In-House	Gujarat	66.1	89.0	9.2	15.6	9.2	11.0	11.0	35.8	0.9	109
	TN	81.7	83.7	18.3	5.8	20.2	0.0	0.0	46.2	1.9	120
	Maharashtra	66.3	69.7	34.8	32.6	29.2	9.0	14.6	10.1	1.1	111
	J & K	80.4	93.1	29.4	40.2	8.8	3.9	18.6	31.4	0.0	108
	Punjab	68.8	79.2	27.3	15.6	23.4	10.4	9.1	0.0	2.6	120
Hybrid	Rajasthan	35.6	100.0	21.8	37.9	29.9	9.2	4.6	3.4	0.0	99
State	Kerala	98.1	28.3	12.3	3.8	3.8	0.9	3.8	1.9	2.8	120

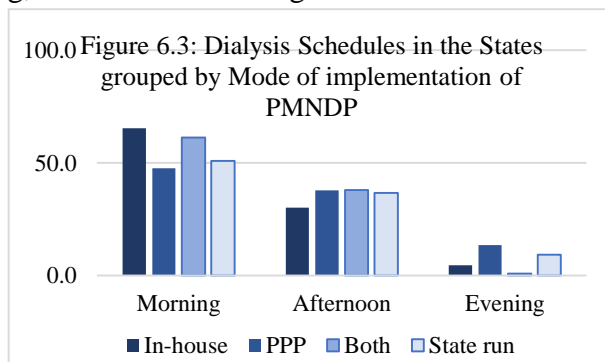
- The common reasons for change in dialysis centres are mostly mentioned in all the States are ‘not affordable’ and ‘distant from residence’. ‘Inconvenient timing of dialysis schedule’, ‘lack of transportation’, ‘cannot claim insurance benefit’, ‘long waiting time for dialysis’ and ‘lack of proper facilities’ have also been mentioned as the reason for changing the dialysis centre.
- Multiple reasons for choosing the present dialysis centre has been captured here. Among majority of the patients irrespective of the mode in which it is operational is ‘free treatment’ and ‘near my home’ is the main attraction which satisfies the very objective of the PMNDP. ‘Less transport cost’, ‘free medicines’, ‘good care’, ‘can avail insurance benefit’, and ‘better facilities’ have also attracted a substantial proportion in each State to the PMNDP established centres.

Table 6.2: Reason for change to the present health facility under PMNDP

	State	Free Treatment	Near my Home	Can avail insurance benefit	Better facilities	No alternate availability	Good care	Less transport cost	Free Medicines	Other	Total
PPP	Karnataka	92.6	88.9	5.6	70.4	21.3	83.3	63.0	58.3	0.9	108
	Delhi	87.5	68.3	3.3	46.7	2.5	65.0	40.0	16.7	0.8	120
	Assam	97.5	99.2	0.0	3.4	9.3	5.9	96.6	28.0	0.0	118
	UP	98.3	74.2	7.5	73.3	20.8	78.3	45.0	39.2	0.8	120
	Bihar	99.2	89.2	8.3	85.8	2.5	90.8	6.7	16.7	0.0	120
	Haryana	86.7	58.3	16.7	47.5	15.8	78.3	32.5	18.3	3.3	120
	MP	77.7	89.3	35.9	44.7	22.3	42.7	40.8	32.0	13.6	103
	HP	89.2	98.3	76.7	90.0	59.2	90.8	86.7	53.3	0.0	120
	AP	97.5	98.3	1.7	0.0	2.5	69.2	78.3	0.0	0.0	120
	Telangana	97.2	72.2	0.9	54.6	4.6	67.6	50.0	37.0	0.0	108
In-House	Gujarat	96.3	95.4	80.7	56.9	44.0	66.1	65.1	79.8	0.0	109
	TN	96.7	95.8	95.8	65.0	47.5	77.5	92.5	90.0	0.8	120
	Maharashtra	91.9	48.6	17.1	54.1	7.2	70.3	29.7	61.3	0.0	111
	J & K	100.0	93.5	63.9	2.8	3.7	92.6	53.7	19.4	0.9	108
	Punjab	94.2	90.0	25.8	54.2	25.0	65.0	55.8	36.7	6.7	120
Hybrid	Rajasthan	55.6	97.0	39.4	26.3	16.2	23.2	61.6	3.0	0.0	99
State	Kerala	98.3	20.8	8.3	62.5	7.5	98.3	11.7	71.7	0.8	120

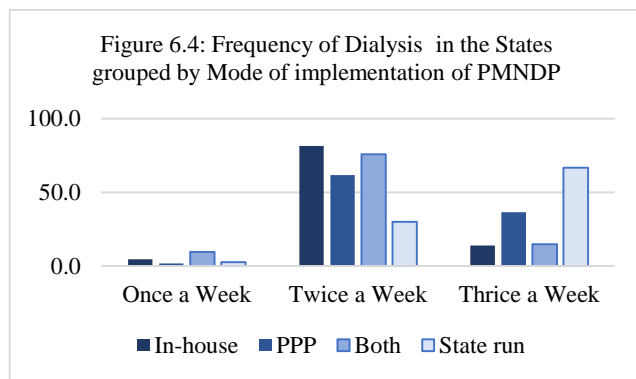
Dialysis Schedule

The dialysis schedule is either morning, afternoon or evening based on the number of beds available and the patient load. Morning schedules appear to be more comfortable for the patients as we see that more patients in general being allotted dialysis schedule in the morning in all four group of states classified by mode of implementation of dialysis schedules (Table 6.3a and 6.3b). Only in those dialysis centres where there are either more number of beds or more patients waiting for dialysis, evening schedules are provided. In a few states like Telangana and Karnataka different slots in a week depending upon availability is extended to the patients.



Frequency of dialysis

The patients need dialysis mostly ‘twice a week’ or ‘thrice a week’ in almost all the



States. Very few patients, mainly newly detected cases need dialysis ‘once a week’.

When the States are grouped by the mode the dialysis centres are operational, in the first three categories frequency of dialysis is

twice a week whereas in the State run in-house mode (Kerala), most patients are undergoing dialysis thrice a week (Table 6.3a and 6.3b).

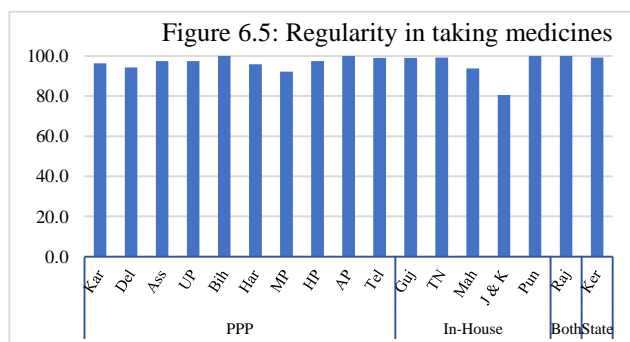
Convenience of dialysis schedule

Majority of the patients reported that the schedules were convenient to them. Those who reported inconvenience (70 patients out of 1944), found time inconvenient to reach and lack of transportation.

The sample includes patients who had been on dialysis for more than 20 years although the mean duration varies between 1 year and 6 years. So a question on whether the patients felt a lack of interest in continuing was canvassed (Table 6.4a and 6.4b). Very few patients expressed lack of interest. Patients report missing dialysis schedules although the proportion missing dialysis is less than 10 percent on an average. But those who missed stated the reason for missing dialysis schedules to be ‘lack of transportation’, ‘no one to accompany’, ‘household responsibilities’, and a few of missed due to COVID lockdown.

Regularity in taking medicines

In majority of the States a vast majority of patients followed the right medicine protocol and never missed medicines. The small proportion missed only ‘sometime’.



Difficulty in getting medicines: A

mixed response in the States can be observed with regard to the difficulty in getting

medicines and is a concern to the patients. Pharmacies within the hospital where the centre is located provides necessary support to the patients. Under PPP mode, most of the patients from dialysis centres in Delhi, Bihar, Andhra Pradesh, half of them from Assam, HP and under In-house mode, patients in J & K report that medicines are either not available or are not available free of cost .

Table 6.3: Difficulties in getting Medicines

	States	No difficulty	Not available	Not available free of cost	Others	Total
PPP	Karnataka	88.0	1.9	9.3	0.9	108
	Delhi	35.0	57.5	5.8	1.7	120
	Assam	50.8	0.0	39.8	9.3	118
	UP	74.2	4.2	20.8	0.8	120
	Bihar	33.3	61.7	5.0	0.0	120
	Haryana	72.5	13.3	10.8	3.3	120
	MP	93.2	3.9	2.9	0.0	103
	HP	51.7	11.7	36.7	0.0	120
	AP	1.7	0.0	98.3	0.0	120
	Telangana	82.4	0.9	16.7	0.0	108
In-House	Gujarat	91.7	8.3	0.0	0.0	109
	TN	80.8	19.2	0.0	0.0	120
	Maharashtra	60.4	19.8	18.9	0.9	111
	J & K	11.1	73.1	13.9	1.9	108
	Punjab	77.5	17.5	5.0	0.0	120
Both	Rajasthan	75.8	2.0	22.2	0.0	99
State	Kerala	18.3	0.8	2.5	78.3	120

In Kerala (State run mode) nearly four in five patients claim that all medicines are not available free of cost. Some medicines are prescribed by a Nephrologist. Lack of Nephrologists in many States in the hospitals where the dialysis centre is attached poses limitations for the hospitals in procuring all such medicines. So patients buy such medicines from outside shop which incurs expenditure on their own so that they don't miss the medicines.

Conclusion:

- There has been massive shift from private to public health facilities for dialysis in all the States with the implementation of PMNDP programme as indicated by the health facility where the patient underwent his first dialysis.
- This shift was stated to be primarily due to non-affordability, lack of transportation, distant from home and long waiting time for dialysis. So the

PMNDP offered dialysis at affordable rates and easy access and better treatment facilities made the patients opt for dialysis under PMNDP.

- The frequency of dialysis @ three per week speak of the severity of illness but majority of the patients report the schedule to be convenient, patients are regular in taking medicines and the only difficulty in getting medicines is that all medicines prescribed by Nephrologists are not available at the hospital and hence they incur expenditure on medicines.

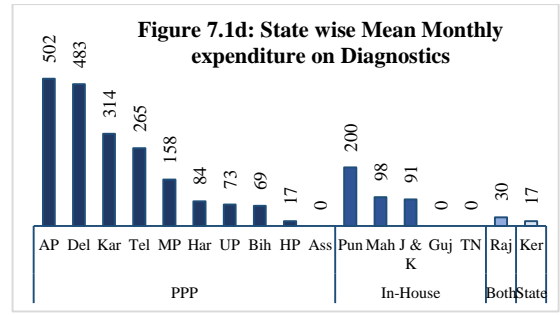
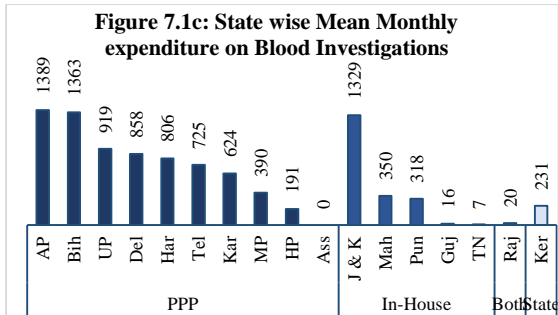
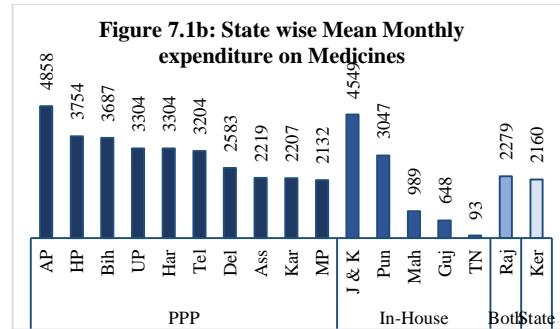
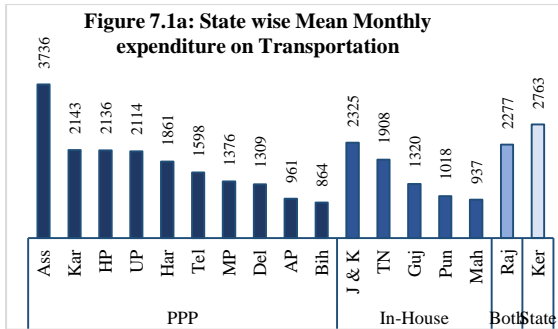
7. Economic Dimension

The primary objective of rolling out the PM National Dialysis programme has been to reduce the out of pocket expenditure on end stage dialysis treatment by rendering free dialysis services. This section examines the patient's responses to our inquiry on the financial burden if any, if so on what heads they incur expenditure and coverage of insurance schemes.

The most common dialysis schedule among patients is twice or thrice a week. So transportation is expected to be one of the major heads the patients would be spending. In order to understand if the patients spend on transportation to reach the dialysis centres the study enquired about the mode of conveyance the patients generally use to avail the dialysis services and the mode of transportation they used last time to have the dialysis. Just over half of the patients used public transport for commuting to the centre in almost all the States. On an average patients who relied on paid transport incurred greater expenditure, even when they use own vehicle, the patients spend on fuel for the vehicle. The responses to usual mode of conveyance are similar to the mode they used last time to commute to the dialysis centre.

Mean monthly expenditure

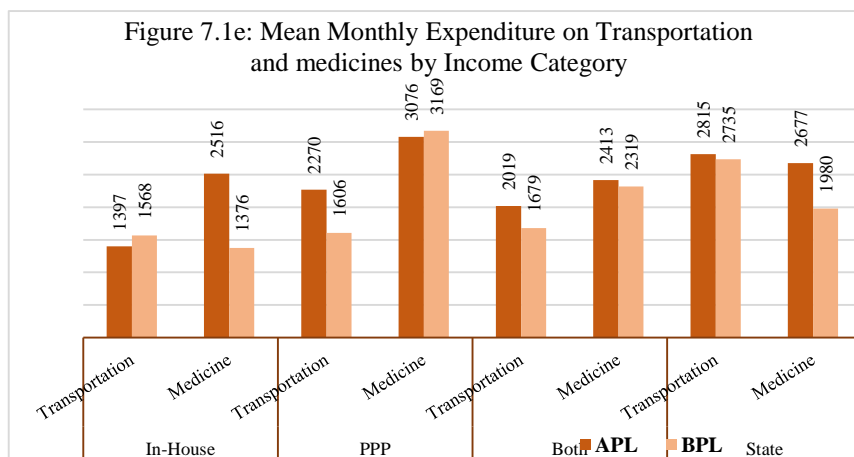
Dialysis is free under the PMNDP both in PPP and in-house mode of implementation. We found that the major heads where the patients incur expenditure are the transportation cost, medicines, diagnostics and consumables (Table 7.1a and 7.1b). Majority of the patient's dialysis schedule is twice or thrice a week and cost on transportation is reported to be the major head for which they incur expenditure. Based on the approximate cost they pay for each trip, the estimated cost on transportation as per their dialysis schedule is highest in Assam among the group of States where dialysis centre is operational in PPP mode. Patients in Karnataka, HP, UP and Haryana spend around Rs. 2000/- every month on an average. In the group of States where in-house mode of dialysis centre is operational, the mean monthly expenditure on transportation is highest in J & K and patients in Punjab and Maharashtra spend less than half the amount patients in J & K spend. As Rajasthan has both modes of implementation, the mean monthly expenditure of the patients is also comparatively higher but still higher in Kerala.



The mean monthly expenditure on medicines to patients is higher in almost all the dialysis centres in States that are implementing the programme in PPP mode ranging between Rs. 2132/- in Assam to Rs, 4858/- in AP. In the second group of States, patients incur higher cost on medicines in J & K and Punjab. In Rajasthan and also in the State implemented dialysis centres in Kerala, patients spend over rupees Two thousand approximately every month (Table 7.1a and 7.1b).

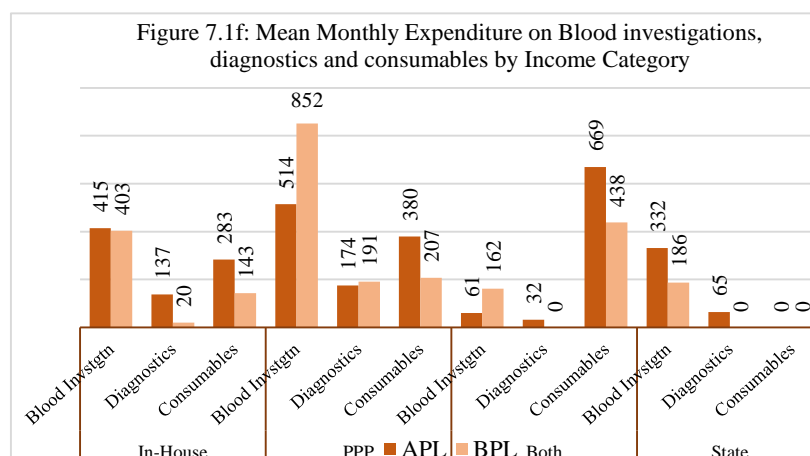
If the expenditure on various components are analysed by mode of implementation and income category,

especially APL and BPL, we find that overall the expenditure incurred is less among BPL patients than



APL except in the group of dialysis centres operational in PPP mode where the BPL patients spend slightly more on medicines.

The expenses on blood investigations, diagnostics and consumables analysed in a similar way point to expenditure on blood investigations among BPL patients in the group of dialysis centres operational in PPP mode and mixed mode to be quite higher than APL patients. Expenditure on diagnostics and consumables are comparatively much lesser in general.



In some hospitals, for instance in Madhya Pradesh, patients under the BPL category reported to have incurred expenditure on OPD/IPD charges collected by Rogi Kalyan Samiti (RKS). Patients informed that without paying OPD/IPD charges, dialysis services are not provided. APL patients also informed that dialysis services are to be covered under ABPMJAY and all the fees and patient user charges such as OPD/IPD charges need to be waived off. At every dialysis centre Rs.60 is charged as OPD/IPD charges from all the dialysis patients for each session.

Financial burden

The financial burden as reported by the patients are captured in Table. Some patients had to sell land or their belongings to meet the expenses for dialysis. We collected information whether the patients sold their belongings before or after availing the services the dialysis under PMNDP (Table 7.2a and 7.2b).

Table 7.1: Financial burden among patients due to treatment of kidney disease.

State	Sold land or belongings		Borrowed money for dialysis					Borrowed amount burden to repay	Total
	BEFORE PMNDP	AFTER PMNDP	DID NOT BORROW	FROM BANK	FROM RELATIVE/FRIENDS	FROM OTHER INSTITUTIONS	OTHERS		
Karnataka	9.3	2.8	29.6	12.0	54.6	0.9	2.8	97.4	108
Delhi	27.5	6.7	39.2	5.0	55.0	0.8	0.0	81.9	120
Assam	16.9	3.4	40.7	1.7	43.2	14.4	0.0	100.0	118
UP	24.2	1.7	43.3	10.8	44.2	0.8	0.8	88.7	120
Bihar	78.3	1.7	10.0	0.8	89.2	0.0	0.0	97.2	120

State	Sold land or belongings		Borrowed money for dialysis					Borrowed amount burden to repay	Total
	BEFORE PMNDP	AFTER PMNDP	DID NOT BORROW	FROM BANK	FROM RELATIVE/FRIENDS	FROM OTHER INSTITUTIONS	OTHERS		
Haryana	27.5	14.2	41.7	5.8	50.8	0.0	1.7	93.2	120
MP	20.4	1.9	34.0	4.9	50.5	0.0	10.7	92.6	103
HP	1.7	0.8	73.3	4.2	22.5	0.0	0.0	87.5	120
AP	4.2	3.3	6.7	0.8	85.8	6.7	0.0	100.0	120
Telangana	17.6	13.9	35.2	2.8	62.0	0.0	0.0	100.0	108
Gujarat	10.1	64.2	16.5	37.6	45.9	0.0	0.0	90.7	109
TN	22.5	0.0	38.3	15.8	45.8	0.0	0.0	95.9	120
Maharashtra	18.9	3.6	28.8	22.5	47.7	0.9	0.0	86.1	111
J & K	58.3	0.9	25.9	20.4	51.9	0.9	0.9	93.8	108
Punjab	3.3	0.8	65.0	1.7	33.3	0.0	0.0	90.6	120
Rajasthan	1.0	0.0	100.0	0.0	0.0	0.0	0.0	84.1	99
Kerala	8.3	0.0	85.0	7.5	6.7	0.0	0.8	88.9	120

- Most of the patients who reported of having to sell land or belongings for meeting the expenses towards dialysis had done it before availing PMNDP services. Only very few have reported that they had to sell land or belongings after availing PMNDP service in almost all the States except Gujarat.
- Patients had to borrow to meet the expenses under heads discussed in the previous section as majority were from the lower economic strata of the society. Most of them borrowed from Relatives/Friends. Patients reporting to have borrowed from bank is relatively higher in Gujarat, Maharashtra and J & K.
- Majority of the patients who borrowed report that the borrowed amount is already a burden to repay.

7.3 Enrolment in Insurance Schemes

A wide range of Health Insurance Scheme, both public and private are available in India. The coverage of patients on dialysis in the health insurance schemes assessed reveal enrolment to be almost complete in Tamil Nadu, Gujarat, HP, Kerala and J & K and around 80 percent in MP and Rajasthan (Table 7.3a and 7.3b). Rest of the States have considerable small proportion of patients enrolled under any health insurance scheme.

Table 7.2: Enrolment in Health Insurance Scheme by Type of Insurance

	Enrolled in Insurance Scheme	Total	ABPMJAY	ESIS	CGHS	ANY PUBLIC SECTOR SCHEME	ANY PRIVATE SECTOR SCHEME	STATE SPECIFIC SCHEMES	OTHER	Total number enrolled in Insurance Schemes
Karnataka	9.3	108	30.0	0.0	0.0	10.0	50.0	10.0	0.0	10
Delhi	12.5	120	13.3	0.0	13.3	6.7	46.7	0.0	40.0	15
Assam	41.5	118	79.6	0.0	0.0	14.3	6.1	0.0	0.0	49
UP	9.2	120	21.4	15.4	7.7	46.2	0.0	0.0	30.8	13
Bihar	20.0	120	75.0	0.0	8.3	0.0	0.0	20.8	12.5	24
Haryana	18.3	120	68.2	18.2	4.5	0.0	9.1	0.0	0.0	22
MP	78.6	103	95.1	0.0	0.0	0.0	3.7	0.0	1.2	81
HP	97.5	120	33.3	0.9	0.0	0.0	0.0	67.5	0.0	117
AP	64.2	120	0.0	0.0	0.0	2.6	2.6	94.8	0.0	77
Telangana	9.3	108	10.0	10.0	10.0	20.0	50.0	0.0	0.0	10
Gujarat	99.1	109	100	0	0	0	0	0	0	108
TN	100.0	120	1.7	0.0	0.0	0.0	0.8	100.0	0.0	120
Maharashtra	45.9	111	31.4	5.9	3.9	5.9	5.9	58.8	0.0	51
J & K	92.6	108	100.0	0.9	0.0	0.0	0.9	0.0	0.0	108
Punjab	12.5	120	33.3	0.0	0.0	20.0	40.0	0.0	6.7	15
Rajasthan	82.8	99	100.0	0.0	0.0	0.0	0.0	0.0	0.0	82
Kerala	92.5	120	89.2	3.6	0.0	0.0	0.0	7.2	0.9	111

In Gujarat, J & K and Rajasthan all those enrolled are members of ABPMJAY. MP and Kerala also have majority of the patients covered under ABPMJAY. In TN, AP and HP enrolment in State specific scheme dominate.

Among patients in those States that report coverage in ABPMJAY and State specific schemes, the dialysis charges are covered, blood tests are only partially covered, diagnostics and medicine costs are covered in Gujarat and Tamil Nadu, medicine charges are covered under the scheme but patients in other states report very less coverage of these expenses.

Conclusion

- Patient responses on higher expenditure indicate that in the hospitals where a Nephrologist is not posted, the medicines prescribed by another Nephrologists, from Government or private sector, cannot be procured by the hospital and distributed through the Pharmacy because of which patients have to buy from medical stores outside the hospital. This has resulted in higher expenditure among

the BPL patients which need to be addressed. All medicines are not always distributed from the Pharmacy free of cost and BPL patients especially bear the burden of higher expenditure on medicines.

- On possible solution to reduce the OOPE on medicines is procurement of medicines prescribed by the Nephrologist at the main DH where the Nephrologist is posted and need based distribution to other hospitals and satellite dialysis centres.
- In those dialysis centres established in district or sub district hospitals in States where the labs are not well developed, all blood investigations required for a patient on dialysis are not possible leading to dependence on other labs outside the hospital which results in higher expenditure on blood investigations. Such higher expenses are reported by patients in AP, Bihar for instance in the first group of State, J & K again in the second group of States. Expenses in Rajasthan in the third category and Kerala in the fourth are minimum. Analysis by income category too highlight the higher expenditure among BPL patients among the centres operational in PPP mode.
- In the hospitals where either the imaging services are not adequate or machines are non-functional frequently, patients report of spending on certain diagnostic services although the cost is much less compared to the other heads already mentioned.
- Expenditure on blood investigations, consumables and diagnostics, although much less compared to that on transportation and medicines, are avoidable either by developing the lab facilities and the imaging services in such hospitals to include the tests as per requirement of the dialysis patients (BPL category) or making provisions to reimburse the cost towards the tests not provided at the dialysis centres.
- Financial burden has reduced considerably as evident from the lesser proportion of patients who had to give away with their belongings after coming under PMNDP
- The patient interviews point to very low coverage in insurance schemes in many States. Increasing the coverage of insurance schemes has to be prioritised by every State so that the patients especially on dialysis who require long term treatment get the benefit of the schemes in addition to what they gain under PMNDP.

8. Social Dimension

Studies on CKD, end stage dialysis during the last decade has invariably shown that patients on long term hemodialysis increasingly felt themselves being dependent on others, felt themselves to be a burden on their caregivers and most patients on dialysis felt helpless for being unable to maintain their employment and sustain daily activities (Tong et. al, 2008) has a feeling of social isolation, frustration (Jhadhav et. al, 2014), anxiety and depression (GoH and Griva, 2018). The PM National Dialysis Programme was implemented in India to reduce these problems among the patients by providing better access to free dialysis services. This section provides a brief overview of the social aspects, quality of life of patients, ability to contribute to the family and society and also the satisfaction on services among the patients who utilize the PMNDP services irrespective of the mode of implementation. We hypothesize the responses to these aspects to be in the affirmative.

Activities of Daily Living (ADL)

The degree to which the activities of daily living (ADL) is affected is assessed using 7 variables: ability to do normal work, ability to travel, being dependent on others, stress or worries caused by the disease, physical appearance, ability to use wash room on their own and any body pain that interfered in the normal work (Table 8.1a & 8.1b).

If the ADL is separately analysed as those

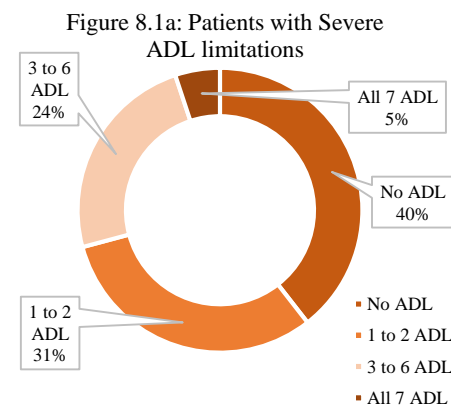
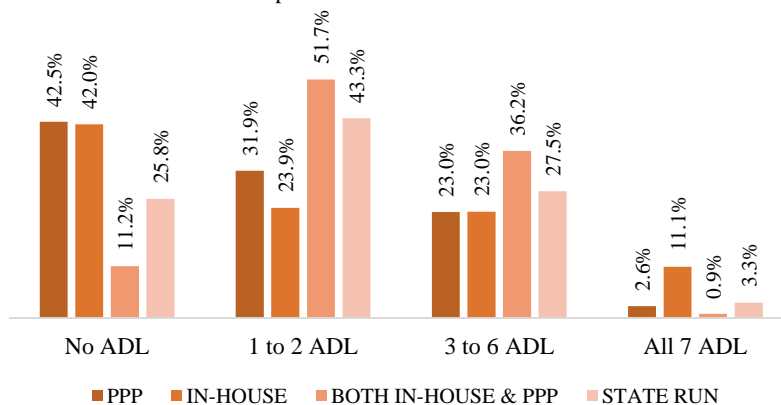


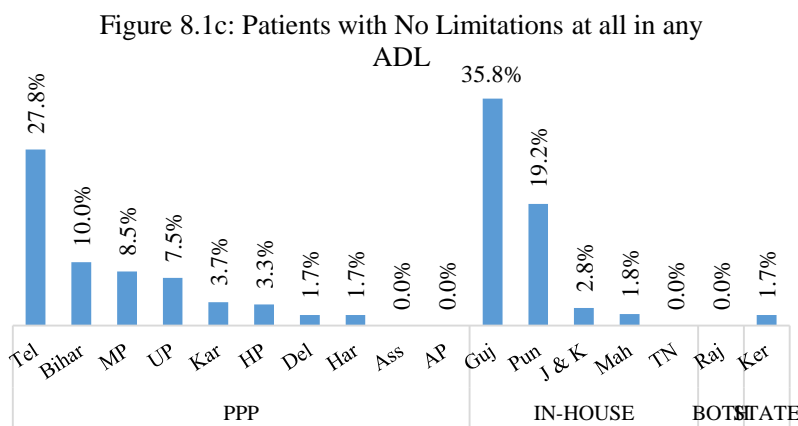
Figure 8.1b: Patients with Severe ADL Limitation Implementation of PMNDP



patients reporting severe limitation with regard to the 7 activities under consideration, 5 percent of the patients in the

sample report severe ADL limitations in all 7 ADL, 31 percent in 1-2 ADL, 24 percent in 3 to 6 ADL and 40 percent do not have severe limitations in any ADL but may either have moderate or no limitation This study did not observe any significant difference in the proportion of respondents reporting no severe limitation between the States implementing dialysis programme in PPP or In-house mode. Severe limitation in ADL among patients noted in all 7 activities is much lesser in all the States although it is higher in the group of States where dialysis centres are established in In-house mode (11 percent) compared to 2.6 percent in the 10 States where Programme is implemented in PPP mode. In Kerala where the centres are put up by the State, 3 percent of the patients have severe limitations in all 7 ADL under study.

Considering all the 17 States, Gujarat appears to be relatively better placed as 36 percent of the patients report no limitation at all in any ADL under study followed by



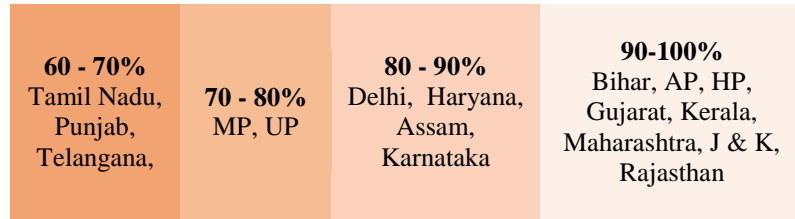
Telangana (28 percent) and Punjab (19 percent). Assam, AP, TN and Rajasthan are at disadvantage as in most of the other States this

proportion ranges between 2 to 10 percent. All patients have either severe or moderate limitations in atleast one ADL.

Extent of improvement in health with access to dialysis services

The States when classified, irrespective of the mode of implementation, by the percentage distribution shows that over 90 percent of the patients report their health to have improved in 8 out of 17 states In four more States 70-80 percent of the patients also reported that their health condition improved and similarly 60-70 percent in 2 more States also had the same view (Table 8.2a & 8.2b).

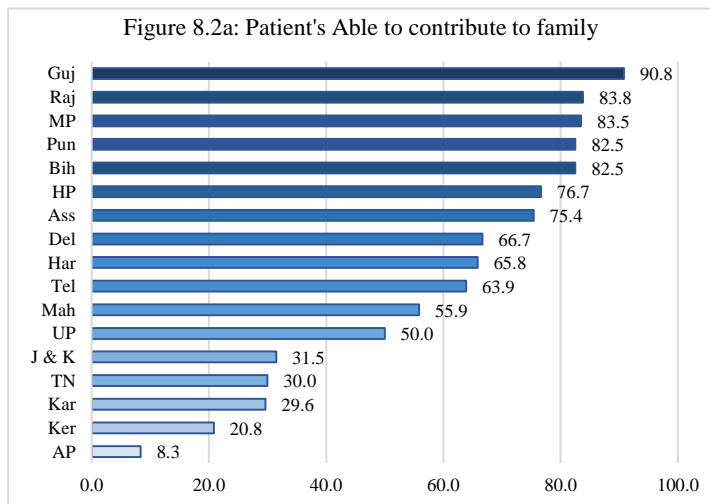
States classified by Percentage distribution of patients whose health improved to some or to a great extent with access to dialysis services



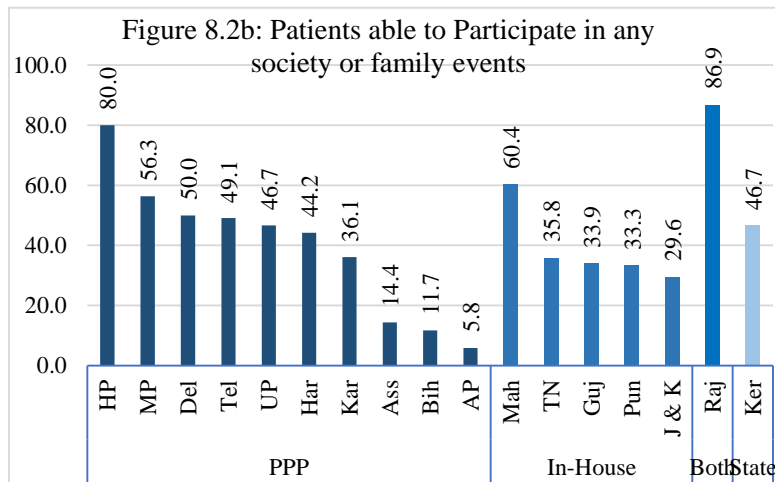
So easy, free and better access to dialysis services have contributed to improvement in the health of the patients to a large extent.

Responses to questions on whether the patients were able to contribute to their family life or be part of social events that connote their societal role inspite of being in end stage dialysis is yet another indicator of the impact of the PMNDP programme. The years of life extended for being able to access dialysis services better than before help them to be part of many family events like being able to see their children’s education achievements among the young adult patients, being able to play their role as parent in their son/daughter’s marriage among the older adult patients, be part of all family functions, social events etc. The findings are presented in Table 8.2a and 8.2b.

The percentage distribution of patients who felt that they were able to contribute to their family inspite of their illness varies between 8.3 percent in AP to 91 percent in Gujarat. Only less than one third of the patients in the States like J & K, Tamil Nadu, Karnataka and Kerala other than Andhra Pradesh reported that they were able to contribute to their family.



The study also sought information on the patient’s ability to participate in family events like Son/daughters marriage, family functions and celebrations, able to be part of children’s educational achievements, participate in social functions and other activities (Table 8.2a & 8.2b). Extended life years on dialysis has enabled many



patients to continue to participate in the family and society. Wide inter-state variations are evident as we find the percentage distribution of patients who reported that they

were able to be part of family and social events to be varying between 80 percent in Himachal Pradesh to 6 percent in Andhra Pradesh among the group of states where dialysis centres are established in PPP mode. The range of variation is 60 percent in Maharashtra and 30 percent in J & K among the second group of states. Majority of the patients are able to be part of such events in Rajasthan and 47 percent report the same in Kerala.

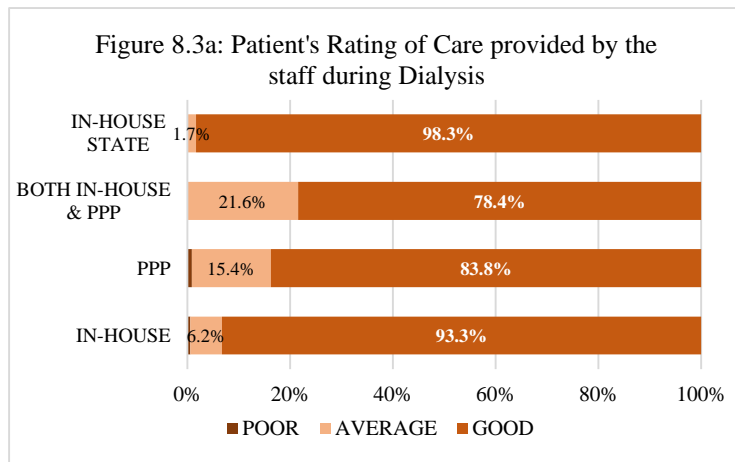
The dialysis centre has an important role in providing necessary information on the dialysis process, various aspects that the patients should take care of when on dialysis so that they maintain good health. The information captured in this regard (Table 8.3a & 8.3b) points to regular discussions between the staff and patients on importance of dialysis. Very few patients in the States report that they were never informed about importance of continuing dialysis after each dialysis session. Among the important aspects of dialysis majority of the patients reported that they received advice mostly on taking medicines regularly, restriction on fluid intake and dietary restrictions. But the patients who reported that they were advised on importance of maintaining weight, and regular weight monitoring, treatment protocols to be followed and maintaining sodium and potassium was comparatively less. Almost all the patients in Assam and Gujarat received advice on the above mentioned aspects but States like Punjab, Maharashtra, Rajasthan and UP need to improve in such knowledge transfer as the

patients who approach the Government health facilities are mostly poor and not well informed on the dialysis process.

Satisfaction with Dialysis services

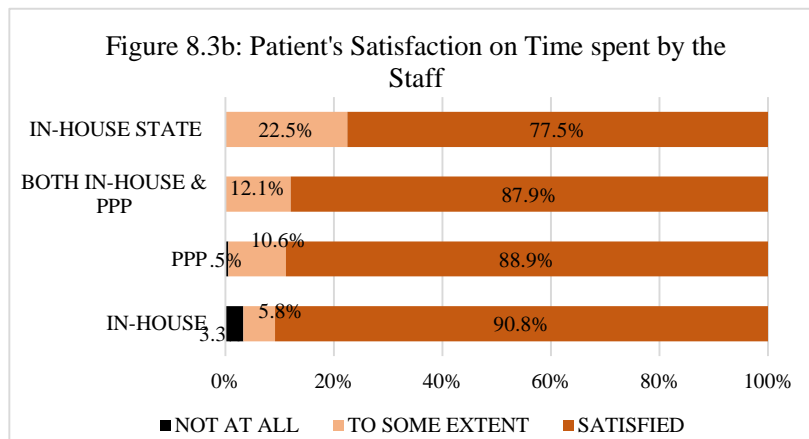
Assessment of patient’s satisfaction on services considers multidimensional concept here since patients differ in their rating on different aspects of their healthcare, such as the care they receive, staff behaviour towards them, time spent by the staff, and access to and quality of the healthcare services. The care provided by doctor and staff is the single most important aspect that greatly influences the ratings of all the other aspects of healthcare.

The impact of the implementation of free dialysis services is visible in the proportion of patients rating the care received at the centre. Those who rate the care provided as



poor is negligible, very few rate it as average and majority rate it a good irrespective of the mode of implementation. Almost all patients in Bihar, Gujarat and Tamil Nadu rate the care as ‘Good’. In AP only 54 percent of the patients assigned good rating in this regard ((Table 8.4a & 8.4b)

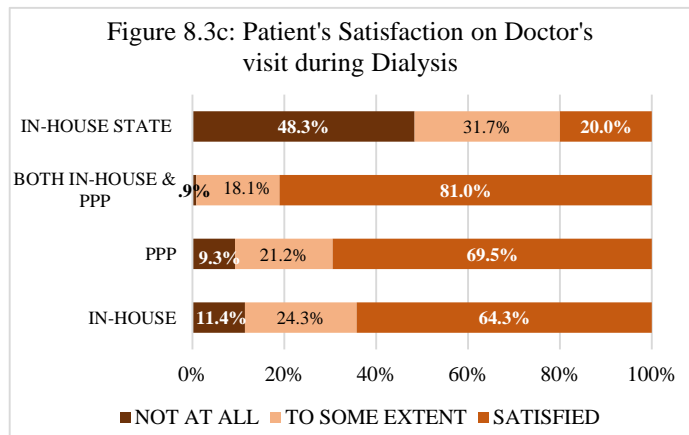
Staff behaviour is an equally important aspect that provides the patients comfort during their stay for dialysis which last for minimum 4 hours. Patients are highly satisfied by the behaviour of staff as over 85 percent of the patients have expressed



their satisfaction without differentials by the mode of implementation of dialysis centres. In those centres where there is lack of staff

and patients fail to get attention owing to greater workload of the available staff, patients tend to report that they are not at all satisfied or assign lesser satisfaction levels. This again is linked to the satisfaction on the time spent by the staff and the level of patient satisfaction. More the patient-staff interaction, higher the satisfaction levels. In the group of States where dialysis centres run on PPP mode and in-house mode some patients appear to be not at all satisfied with the time spent with them which is due to the higher patient-staff ratio when a dialysis technician or a staff nurse on duty has to manage too many patients at a time. In Kerala where the dialysis centres are run by the State the staff on duty in the dialysis centres with more number of beds, managing more than one or two dialysis patients at a time becomes necessary which lead to some patients in assigning moderate level of satisfaction.

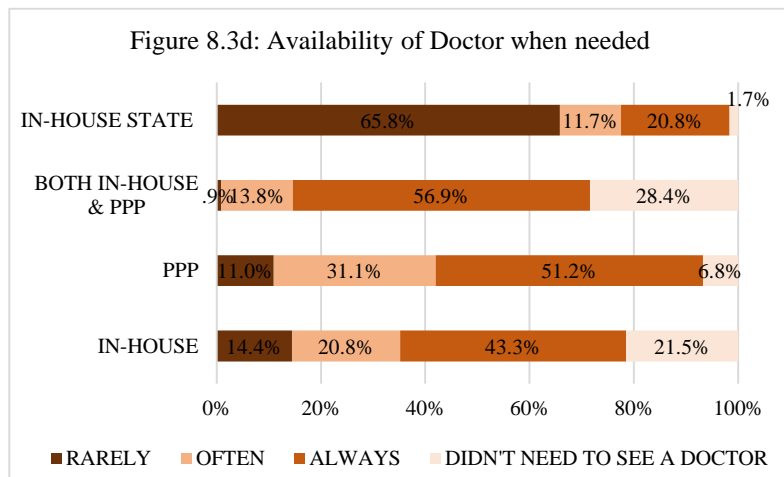
Each dialysis lasts for minimum of four hours. The severity of the kidney disease



varies considerably among patients. Some patients have been on dialysis for a long period while other have been put on dialysis recently. So the patient suffering and the difficulties faced during the dialysis process too vary.

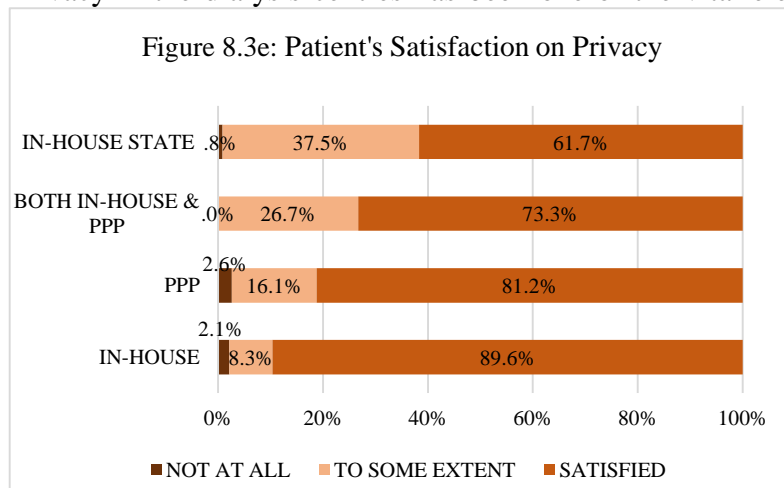
Some experience vomiting, shivering, bodily discomfort, falling blood pressure levels, mental health issues etc. So the patients seek comfort in such situations and usually demand the presence of a Doctor at such times of discomfort. Satisfaction on Doctors visit during dialysis is found to be varying between the group of States under study. In the group of States where the PPP mode and in the in-house mode are operational, around 10 percent of the patients reported that they are not at all satisfied. The absence of a regular Medical Officer on full time basis in the dialysis centres have been noted in such cases. The situation in Kerala is drastically different as the patients are well aware of the dialysis procedure due to their better literacy levels and appear to be demanding the presence of a Doctor during the dialysis process more. Hence

nearly half the patients in the sample selected expressed that they were not at all satisfied on this aspect although the presence of a Medical officer in charge of the dialysis centre is ensured. In the DH, where there is a Nephrologist, satisfaction on Doctors visit is higher. This fact is reiterated from the response from the patients to question on satisfaction levels on availability of Doctor when needed. Irrespective of the mode of implementation of dialysis centres with Rajasthan (both PPP & In-house mode) as an exception, patient satisfaction is low among patients. The more demanding nature of the patients in Kerala is again visible in this aspect. The study also assessed the satisfaction levels on Doctor's consultation and similar responses were observed (Table). If the association between the education levels and satisfaction of patients are assessed in this regard, one can find that the illiterate and those with lower levels of education tend to be satisfied. In most of the states the services rendered by the dialysis centres established under PMNDP have been a great source of



satisfaction to the patients who come from the lower economic strata and hence 70 to 80 percent of the patients are satisfied. These observations point to need for placing a Medical Officer on regular basis in the Dialysis Units in every hospital.

Privacy in the dialysis centres has been one of the vital elements mentioned in the

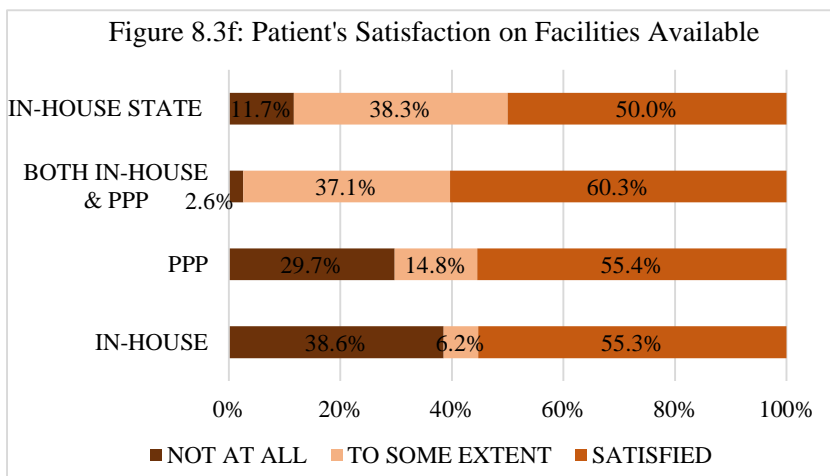


guidelines of the PMNDP.

Development of infrastructure necessitates separating the dialysis beds by curtains, and privacy during examination also has

to be ensured. This aspect appears to have been taken care of while setting up the centres as reflected in the proportion of patients expressing satisfaction on privacy. Only very few patients have expressed their dissatisfaction and they are from those centres that failed in providing curtains to separate beds to ensure privacy. Majority of the patients are either satisfied fully or to some extent.

Infrastructure set up guidelines is clearly designed so as to provide all facilities needed for a comfortable stay in the hospital. Here we look at the patient satisfaction on the facilities available and the cleanliness and hygiene maintained in the dialysis centres.

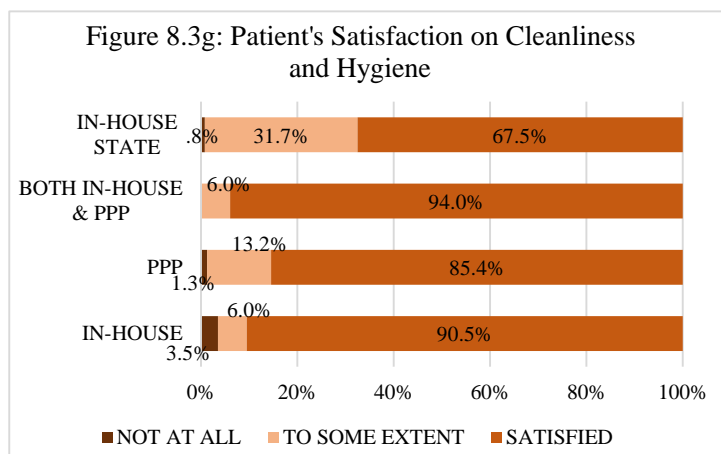


In the group of States where the dialysis centres run on PPP mode and in those put up in in-house mode availability of facilities are lacking

especially proper waiting area for bystanders, separate toilet facility for patients, bystanders and staff, dietary service, recreation facility like wall mounted television etc. This has led to patient dissatisfaction among 30 percent of the patients in the group of States running PPP mode and 39 percent in the States where it is in-house mode. In the State run in-house mode in Kerala around 12 percent are not at all satisfied with the facilities available.

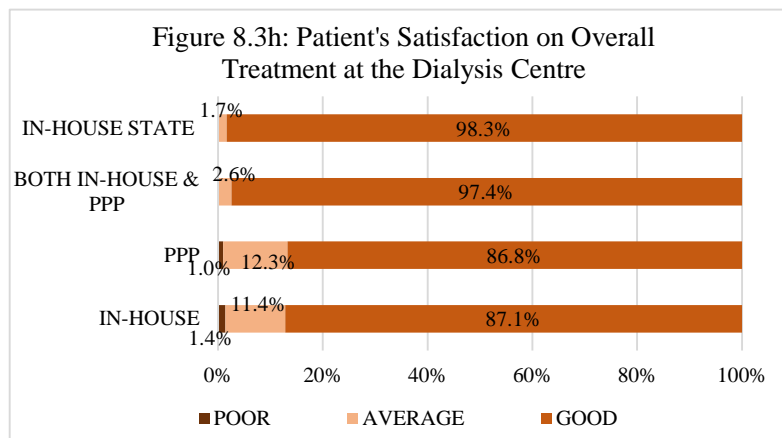
Cleanliness and hygiene maintained in the dialysis centres is reflected in the patient

satisfaction levels. Over 90 percent of the patients are satisfied in most of the States. Only a small proportion of patients expressed their dissatisfaction. Lack of proper housekeeping staff observed in some dialysis



centres, unclean toilets etc were the cause of dissatisfaction.

The overall satisfaction on the treatment at the dialysis centres was assessed which



should necessarily be a summary picture of the various domains on which satisfaction level was assessed. The good treatment facilities rendered to the patients at the dialysis centres are

visible as around 87 percent of the patients in both the group of States where PPP mode and in-house mode are implemented are satisfied with the treatment provided. The satisfaction levels are even better in the state run in-house mode (98 percent in Kerala) and in Rajasthan (97 percent) where some centres are established in PPP and some others in in-house mode.

Conclusion:

- So the patient satisfaction levels discernible from the study shows the impact the PM National Dialysis Programme has created in various States with the free, easy and access to good quality care for the treatment of kidney diseases.
- Overall satisfaction levels on treatment, care provided, privacy, cleanliness and hygiene is high. However manpower availability is an issue which may have brought down the satisfaction levels of patients.
- The ADL limitations does not appear to be bothering a large proportion of patients when compared to research based evidence during the past decades which is perhaps due to the access to treatment during the early stages with the implementation of PMNDP
- The findings clearly indicate that the life years extended due to free and easy access to dialysis under the PMNDP all over the country has provided the patients opportunities to contribute to their own family and the society which has made a large number of patients to continue to be socially active as reflected in the satisfaction levels.

9. Implementation of PMNDP

Implementation of PMNDP has, to a large extent, achieved the prime objective of extending access to dialysis services at affordable rates to those below poverty line requiring dialysis. The study findings show that the DH/SDH/CHCs where the dialysis centres are established have been able to deliver the necessary care to those requiring dialysis. This section presents the views of the Medical Officers in charge of the dialysis centre, Dialysis technicians, Staff Nurses and other officers who have a good role in the functioning of the dialysis centres.

In all the States, the stake holders view the PMNDP programme to be a blessing to those from the lower and middle strata of the society. Majority of the patients have had their dialysis at private facilities and the programme has attracted them to the Government hospitals as the cost of dialysis is affordable. The patients from the APL category are also provided dialysis at such centres across the country. The quality of services is good and patients are satisfied with the treatment in general.

The implementation is the responsibility of the hospital and operational challenges are bound to occur as in any other health care programme. Some of their views collected through in-depth interviews with a view to understand the implementation and the challenges if any from all the 17 States were transcribed and the general observations are summarized here.

Infrastructure:

- During implementation of dialysis centres, in those hospitals where there is shortage of space, the guidelines in implementation of dialysis centres cannot be strictly followed.
- Specific one way entrance area for the patients to avoid infections, adequate waiting area for patient's bystanders, separate toilet facilities for dialysis patients, Attendant and Staff etc are not possible in hospitals that do not have adequate space.
- Financial support is required in providing better infrastructure like recovery room and recliner beds to provide better comfort to the patients, CSSD, OT, HDU for

the centres are needed to improve quality of services, Dialysis centres not functional at ground floor, should be supported by lift facility for the convenience of the patients.

Equipment availability and maintenance:

- Machine overuse, some crossing 30,000 hrs, are either irreparable or incurs huge costs on repair.
- In some of the centres, for instance in Madhya Pradesh, Dialysis centre technician need to be informed of the warranty period or preventive maintenance done for the machine. A machine maintenance log-book may be kept at the dialysis centre as per the guidelines uniformly in all the centres.
- Providing advanced equipments like ACT machine, Dynamic water saving device, wall mounted oxygen supply in centres that lack them could help in providing quality services in such centres, provision of which would be beneficial in the smooth functioning of the dialysis centre.
- UPS is procured at the time of establishment of the centre and the capacity is based on the number of beds. With increasing demand for dialysis when new dialysis beds are added, the UPS fails to provide necessary back up. A dialysis centre in Karnataka reported UPS backup of only 45 minutes when a dialysis lasts for 4 hours. Every dialysis centre requires a generator separately as there are limitations in using a hospital generator. Full power back-up in case of electricity failure is required for dialysis centre.
- Equipment maintenance does not always maintain the timeline which disturbs the patient dialysis schedule often and sometimes inflates the number of patients in waiting list.
- There is lack of trained technician at the dialysis facility for repair and maintenance of RO water filter plant. For instance, at Dialysis Centre, Jabalpur new RO plant has been procured but it was not installed due to lack of services for RO maintenance.
- It was observed that testing of water quality is not available at some of the dialysis centre. Water samples are either sent to Patna (Bihar) or Satna (M.P.) from all the dialysis centres. It takes at least 3-4 weeks to receive the water quality report.

- Effective bio-medical waste management facility is required in all the dialysis centres as some centres like that in Vidisha, MP, reported failure of waste collection by outsourced staff..

Manpower:

- Dialysis centres that function on 24 x 7 basis and those with more number of beds face severe staff crunch necessitating staff on duty to take multiple shifts. The staff shortage is evident from the Patient-Technician and patient-Staff Nurse ratios in the centres.
- Availability of Nephrologist is only through tele-consultation in some States. A Nephrologist empanelled with the agency under PPP mode is consulted only in case of emergency. In dialysis centres put up in rural areas Nephrologists fail to visit as observed in a rural hospital in Karnataka where the road condition to reach the hospital is bad. E-Sanjeevani platform should be used to connect the dialysis MO / Technician to the Nephrologist.
- DH or health facility should have a Nephrologist for second opinion regarding increase or decrease of dialysis frequency or for addressing any complications.
- Lack of awareness among staff on the functionality of dialysis, especially managed on internal arrangement. Neither the Staff nor the Nodal officer know about sanctioned staff strength for any dialysis centre. In case district nodal officer or in-charge officer is from health department, then he should be linked with the Nephrologist of the agency for any consultation.
- Staff of the dialysis centre functioning under PPP mode were given training only at the time of joining. Later only online orientation is given. Some of the staff informed about requirement of more training.
- Under PPP mode, staff recruited by the agency are shuffled to other dialysis centres as per the case load, creating problems in service delivery, This issue need to be addressed especially in Madhya Pradesh.
- Staff posted exclusively in the dialysis centre under PMNDP complain of not getting salary regularly in some of the centres.

- Lack of cleaning staff at the dialysis centre is a problem for most of the hospitals as the DH/SDH has been facing cleaning staff shortage and managing with HMC funds

Administration:

- Separate office for administration being not available for Dialysis Centres in many hospitals makes the task of registration and followup later on a cumbersome task to the patients and also the bystanders.
- Receiving funds at the fag end of the year poses problems in expenditure and increases chances of funds remaining unutilized. So transfer of funds on time would enable the centre to use it for improving the quality of services.

10. Conclusion

The implementation of the PMNDP programme has been viewed in various dimensions in the study. Being a health care programme intended to improve access and quality of health care services, assessment in both the provider and beneficiary perspective revealed the effectiveness of the programme and the challenges to be addressed in order to improve further. Apart from such an approach this study tried to understand the impact of the programme in different domains like the dialysis process, economic and social implications in the patient perspective.

The study findings clearly show that the PMNDP programme has been quite successful in achieving the primary objective of limiting the expenses, improving the health of the population on treatment of ESRD patients below the poverty line and in addition extending access to dialysis services at affordable rates to those in the middle income group too irrespective of the mode of implementation.

The massive shift from private sector to public sector for dialysis reflects the impact of the programme without significant differentials by mode of implementation of PMNDP. Recent data also indicate a 4-fold increase in dialysis utilization in less than 5 years (Shaikh et. al, 2018) and the long duration on kidney disease, the higher mean duration on haemodialysis evident from the present study point to the need for scaling up the programme.

Understanding the implementation of PMNDP at facility level identified that dialysis centres functioning at district hospitals are better equipped compared to the dialysis centres at SDH/CHC in availability of functional equipments, procedures done, patient friendly infrastructure and support infrastructure. By mode of implementation majority of dialysis centres functioning under 'In-House' mode could be rated 'Good' than those under PPP or hybrid mode.

But the operational challenges in terms of lack of space, manpower crunch evident from higher patient-technician and patient-staff nurse ratio in one third of the centres demands more inputs in the form of additional manpower support, infrastructure support to run the dialysis centres as per guidelines for further improving the services under PMNDP programme.

Understanding the programme in the process domain revealed the shift from private to public sector to avail PMNDP services to be primarily due to non-affordability, lack of transportation, distance from home and long waiting time for dialysis.

Analysing the economic aspects helped to reveal the reduced financial burden after implementation of the programme indicated by the lesser proportion of patients having to sell their belongings or borrowing from banks and enterprises. The lower mean expenditure on investigations, diagnostics and consumables is a good indication but the higher expenditure on transportation and medicines need to be reduced. Improved coverage in health insurance schemes need to be prioritised by every state to reduce such expenditure and covering the transportation cost of the BPL patients in particular need to be explored.

Again patient responses on higher expenditure on getting medicines due to the lack of Nephrologist leading to dependence on private sector for consultation is a major concern. Hospitals without a Nephrologist has limitations in procuring medicines prescribed by a Nephrologist in a private hospital or other Government hospital. All medicines are not always distributed from the Pharmacy free of cost and BPL patients especially bear the burden of higher expenditure on medicines. An alternative method to reduce this expenditure would be procurement of medicines prescribed by the Nephrologist at the main DH where the Nephrologist is posted and need based distribution to other hospitals and satellite dialysis centres.

The findings focusing on the social dimension clearly indicate that the life years extended due to free and easy access to dialysis under the PMNDP all over the country has provided the patients opportunities to contribute to their own family and the society and has made a large number of patients to continue to be socially active as reflected in the satisfaction levels. The satisfaction level of the patients, analysed on various aspects of care giving also signifies the benefit of PMNDP.

Some findings deserve attention like the sex disaggregated data showing males to be undergoing dialysis three times more than females which is also in similar line with

research study findings. Also prevalence of NCDs, chiefly hypertension, diabetes and to some extent liver diseases and CVD among the patients with kidney disease showing the greater disease burden demands further clinical research on analysing the causative factors.

Overall the access to free dialysis at the numerous centres in each State/UT is a blessing to those suffering from kidney diseases. Observed decreasing mean age of patients requiring dialysis, minimum age of patients being 20 years and 3 to 5 percent of the patients less than 40 years in the present study, the growing incidence of non-curable life style morbidity and CKD and the observed longer span of bearing the disease burden demands more inputs in the form of additional manpower support, infrastructure support to run the dialysis centres as per guidelines for further improving the PM National Dialysis Programme.

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Appendix I

Table 1.1: List of health facilities where the selected Dialysis centres ate established

State	District	Health Facilities where the dialysis centres are established
1. Karnataka	1. Tumkur	1. Tumkur DH 2. Tiptur GH
	2. Dharwad	3. Dharwad DH 4. Kundgul GH
	3. Dakshina Kannada	5. Wenlock Hospital 6. Belthangady GH
2. Gujarat	4. Mehsana	7. Mehsana CH 8. SDH Kadi
	5. Anand	9. Shree Sayaji Hospital
	6. Kheda	10. General Civil Hospital
	7. Tapi	11. General Hospital
3. Delhi	8. The Dangs	12. GH Ahwa
	9. South West Delhi	13. Indira Gandhi Hospital
	10. North West Delhi	14. Deep Chand Bandhu Hospital 15. Bhagwan Mahavir Hospital
	11. North Delhi	16. Maharishi Balmiki Hospital
	12. South Delhi	17. Pt. Madan Mohan Malviya
4. Tamil Nadu	13. West Delhi	18. Guru Govind Singh Hospital
	14. Chengalpattu	19. SDH Tambaram
	15. Kancheepuram	20. DH Kancheepuram
	16. Perambalur	21. DH Perambalur
	17. Tiruchirapalli	22. SDH Thuraiyur
	18. Ramanathapuram	23. DH Paramakudi
5. Assam	19. Virudhunagar	24. SDH Srivilliputhur
	20. Dhemaji	25. Dhemaji CH
	21. Sivsagar	26. Sivasgar CH
	22. Morigaon	27. Morigaon CH
	23. Nagaon	28. B.P. CH
	24. Nalbari	29. S.M.K.CH
	25. Bongaigaon	30. Bongaigaon CH
6. Kerala	26. Thiruvananthapuram	31. GH Neyyattinkara 32. TH Parasala
	27. Palakkad	33. DH Palakkad 34. THQH Ottappalam
	28. Malappuram	35. DH Tirur 36. CHC Chungathara
7. Uttar Pradesh	29. Lucknow	37. Balrampur DH
	30. Jalaun	38. DH Jalaun
	31. Sultanpur	39. DH Sultanpur
	32. Ayodhya	40. Combined Hospital Darshan Nagar Ayodhya
	33. Bareilly	41. Maharana Pratap Combined Hospital Bareilly
	34. Itawa	42. DH Itawa
8. Bihar	35. Patna	43. Govt. Hospital Patna
	36. Darbhanga	44. SDH Darbhanga
	37. Banka	45. CH Banka
	38. Nalanda	46. CH Nalanda
	39. Gaya	47. CH Gaya
	40. Samastipur	48. CH Samastipur
9. Maharashtra	41. Pune	49. Women Hospital Baramati 50. DH Pune
	42. Nashik	51. GH Malegaon 52. CHC Deola
	43. Buldhana	53. DH Buldhana 54. GH Khamgaon
10. Haryana	44. Panchkula	55. CH Panchkula
	45. Ambala	56. CH Ambala

State	District	Health Facilities where the dialysis centres are established
	46. Yamunanagr	57. CH Yamuna Nagar
	47. Hisar	58. CH Hisar
	48. Sirsa	59. GH Sirsa
	49. Fatehabad	60. DH Fatehabad
11. Madhya Pradesh	50. Dhar	61. DH Dhar
		62. CH Badnavar
	51. Vidisha	63. DH Vidisha
	52. Jabalpur	64. DH Jabalpur
12. Himachal Pradesh	53. Neemuch	65. DH Neemuch
		66. CHC Manasa
	54. Mandi	67. DH Mandi
13. Jammu & Kashmir	55. Kangra	68. CH Sundernagar
		69. DH Dharamshala
	56. Sirmour	70. CH Palampur
14. Andhra Pradesh		71. Govt. Medical College Nahan
		72. CH Paonta Sahib
	57. Jammu	73. DH Gandhinagar
	58. Udhampur	74. DH Udhampur
	59. Ramban	75. DH Ramban
	60. Kulgam	76. DH Kulgam
15. Rajasthan	61. Budgam	77. Aga Syed Hospital
	62. Baramulla	78. Medical College Baramulla
	63. Parvathipuram	79. Parvathipuram DH
		80. Palakonda AH
	64. West Godavari	81. Tadepalligudem AH
	65. Eluru	82. Jangareddyguddem AH
	66. Kurnool	83. Adoni AH
16. Telangana	67. Proddatur	84. DH Proddatur
	68. Ajmer	85. Govt. Satellite hospital Ajmer
	69. Chittorgarh	86. Shree Sanwali Ji GH Chittorgarh
	70. Rajsamand	87. R K Govt Hospital
	71. Udaipur	88. Goverdhan GH Nathdwara
17. Punjab		89. Dr.Sundarlal Bhandari Satellite GH Udaipur
	72. Hyderabad	90. Kingkoti DH
		91. Malakpet SDH
	73. Karimnagar	92. Karimnagar DH
		93. Huzurabad Area Hospital
17. Punjab	74. Khammam	94. Khammam DH
		95. Sathupally CHC
	75. Patiala	96. DH Patiala
		97. SDH Rajpura
17. Punjab	76. Nawanshahr	98. DH Nawanshahr
		99. CHC Bunga
	77. Tarn Taran	100. DH Tarn Taran
	78. Amritsar	101. DH Amritsar

Appendix II

Household Characteristics

Table 3.1a: Household Characteristics of respondents in the group of States classified by Mode of implementation of PMNDP

Household Characteristics	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Type of house										
KUCHHA	24.1	6.7	0.8	15.0	44.2	7.5	19.4	14.2	5.0	3.7
SEMI-PUCCA	38.9	8.3	54.2	26.7	17.5	17.5	19.4	30.8	72.5	22.2
PUCCA	37.0	85.0	44.9	58.3	38.3	75.0	61.2	55.0	22.5	74.1
Ownership of HH										
OWNED	79.6	66.7	91.5	89.2	86.7	87.5	89.3	94.2	86.7	73.1
RENTED	17.6	33.3	7.6	7.5	13.3	10.8	6.8	5.0	12.5	25.9
OTHER	2.8	0.0	0.8	3.3	0.0	1.7	3.9	0.8	0.8	0.9
Main drinking water source										
MINERAL WATER	6.5	30	0	17.5	3.3	5	7.8	1.7	3.3	19.4
PIPED WATER	63.0	64.2	19.5	39.2	35.0	84.2	48.5	75.8	90.8	46.3
WELL	13.9	0.0	6.8	0.8	0.0	0.0	4.9	10.0	0.8	0.9
HAND PUMP	3.7	0	39.8	34.2	60.8	5	6.8	5	3.3	1.9
DEEP BORE WELL	9.3	4.2	33.9	8.3	0.8	2.5	29.1	7.5	1.7	6.5
OTHERS	3.7	1.7	0.0	0.0	0.1	3.3	2.9	0.0	0.1	25.0
Toilet facility										
AVAILABLE WITHIN THE HOUSE	59.3	95.8	44.1	84.2	94.2	94.2	78.6	31.7	26.7	40.7
AVAILABLE BUT OUTSIDE THE HOUSE	40.7	3.3	55.9	11.7	0.8	3.3	16.5	67.5	63.3	57.4
NO TOILET FACILITY	0	0.8	0	4.2	5	2.5	4.9	0.8	10	1.9
Main source of cooking fuel										
ELECTRICITY	0	0	0.8	3.3	0	8.3	1	0	0	0
WOOD	17.6	0.8	2.5	25.8	19.2	22.5	34.0	33.3	9.2	3.7
LPG	82.4	99.2	96.6	70.8	80.8	66.7	65.0	66.7	90.8	96.3
OTHERS	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0
Mean HH Size	5.3	5.3	4.8	6.2	6.4	5.8	5.5	5.8	4.2	4.1
Total	108	120	118	120	120	120	103	120	120	108

Table 3.1b: Household Characteristics of respondents in the group of States classified by Mode of implementation of PMNDP

	In-House					Hybrid	State-run In-House
Household Characteristics	Guj	TN	Mah	J & K	Pun	Raj	Ker
Type of house							
KUCHHA	22.9	9.2	28.8	13.9	5.8	1.0	0.8
SEMI-PUCCA	23.9	55.8	29.7	22.2	17.5	15.2	30.8
PUCCA	53.2	35.0	41.4	63.9	76.7	83.8	68.3
Ownership of HH							
OWNED	89.0	80.8	79.3	97.2	93.3	99.0	80.8
RENTED	8.3	19.2	19.8	2.8	6.7	1.0	10.8
OTHER	2.8	0.0	0.9	0.0	0.0	0.0	8.3
Main drinking water source							
MINERAL WATER	6.4	10.8	13.5	0.0	24.2	0.0	0.0
PIPED WATER	77.1	75.0	63.1	75.0	52.5	98.0	28.3
WELL	2.8	4.2	14.4	1.9	0.0	0.0	48.3
HAND PUMP	1.8	0.0	5.4	1.9	10.8	0.0	0.0
DEEP BORE WELL	11.9	6.7	2.7	8.3	12.5	2.0	16.7
OTHERS	0.0	3.3	0.9	13.0	0.0	0.0	6.7
Toilet facility							
AVAILABLE WITHIN THE HOUSE	57.8	72.5	63.1	40.7	97.5	97.0	59.2
AVAILABLE BUT OUTSIDE THE HOUSE	40.4	13.3	22.5	55.6	1.7	3.0	40.8
NO TOILET FACILITY	1.8	14.2	14.4	3.7	0.8	0.0	0.0
Main source of cooking fuel							
ELECTRICITY	0.0	0.0	0.0	2.8	1.7	4.0	0.0
WOOD	15.6	5.8	15.3	40.7	6.7	12.1	55.0
LPG	84.4	94.2	84.7	56.5	91.7	83.8	44.2
OTHERS	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Mean HH Size	4.40	4.13	5.19	6.24	6.06	6.11	4.48
Total	109	120	111	108	120	99	120

Individual Characteristics

Table 4.1a: Individual Characteristics of respondents in the group of States classified by Mode of implementation of PMNDP

Individual Characteristics	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Sex of the patient										
MALE	71.3	62.5	68.6	66.7	84.2	74.2	68.0	65.0	80.0	66.7
FEMALE	28.7	37.5	31.4	33.3	15.8	25.8	32.0	35.0	20.0	33.3
Mean age	52 ± 12.3	44.9 ± 12.9	48.8 ± 11.3	45.6 ± 15.1	46.3 ± 12.1	46.5 ± 14.6	44.6 ± 13.9	51.2 ± 13.3	47.3 ± 12.8	46.2 ± 13.3
Age of patients										
<20 years	0	0.8	0	2.5	1.7	0.8	2.9	1.7	2.5	0.9
20-39 YEARS	17.6	36.7	21.2	34.2	25.0	35.0	37.9	19.2	22.5	35.2
40-59 YEARS	51.9	45.0	59.3	43.3	55.8	40.8	44.7	47.5	58.3	48.1
>=60 YEARS	30.6	17.5	19.5	20.0	17.5	24.2	17.5	31.7	16.7	15.7
Current marital Status										
CURRENTLY MARRIED	79.6	79.2	89.8	74.2	87.5	85.0	82.5	81.7	95.0	82.4
WIDOWED	11.1	5.8	2.5	6.7	1.7	5.8	1.9	7.5	0.8	4.6
DIVORCED	0	0.8	0	0.8	0.0	0	0	0	0.0	0
SEPARATED	0	0	0	0.0	0.0	0	0.97	0	0.0	0.9
NEVER MARRIED	8.3	14.2	7.6	18.3	9.2	8.3	14.6	9.2	4.2	12.0
Education (completed years of schooling)										
Illiterate	0.0	0.8	0.0	2.5	1.7	0.8	2.9	1.7	2.5	0.9
1-10 YEARS	17.6	36.7	21.2	34.2	25.0	34.2	35.0	19.2	22.5	35.2
11-12 YEARS	51.9	45.0	59.3	43.3	55.8	40.8	44.7	47.5	58.3	48.1
GRADUATION & ABOVE	30.6	17.5	19.5	20.0	17.5	24.2	17.5	31.7	16.7	15.7
Total	108	120	118	120	120	120	103	120	120	108

Table 4.1b: Individual Characteristics of respondents in the group of States classified by Mode of implementation of PMNDP

Individual Characteristics	In-House					Hybrid	State-run In-House
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Sex of the patient							
MALE	71.6	76.7	70.3	63.9	71.7	72.7	79.2
FEMALE	28.4	23.3	29.7	36.1	28.3	27.3	20.8
Mean age	46.8 ± 12.9	48.4 ± 11.1	50.4 ± 12.7	48.6 ± 16.0	47.3 ± 14.0	46.8 ± 13.0	53.8 ± 10.8
Age of patients							
<20 years	1.8	0.8	0.9	1.9	1.7	1.0	0.0
20-39 YEARS	31.2	20.8	19.8	27.8	24.2	30.3	10.0
40-59 YEARS	46.8	61.7	51.4	39.8	48.3	50.5	55.0
>=60 YEARS	20.2	16.7	27.9	30.6	25.8	18.2	35.0
Current marital Status							
CURRENTLY MARRIED	83.5	85.8	85.6	77.8	75.8	88.9	80.8
WIDOWED	2.8	3.3	3.6	5.6	5.8	2.0	7.5
DIVORCED	0.9	0.0	0.0	0.0	0.0	2.0	0.8
SEPARATED	0.0	0.8	0.9	0.0	0.0	0.0	2.5
NEVER MARRIED	12.8	10.0	9.0	15.7	17.5	7.1	8.3
Education (completed years of schooling)							
Illiterate	4.6	13.3	3.6	38.0	2.5	2.0	5.8
1-10 YEARS	60.6	68.3	64.0	44.4	53.3	46.5	77.5
11-12 YEARS	19.3	15.0	15.3	11.1	30.8	31.3	10.8
GRADUATION & ABOVE	15.6	3.3	17.1	6.5	13.3	20.2	5.8
Total	109	120	111	108	120	99	120

Table 4.1c: Individual Characteristics of respondents in the group of States classified by Mode of implementation of PMNDP

	PPP Mode									
Individual Characteristics	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Current Work status										
WORKING	4.6	5.8	40.7	9.2	7.5	6.7	19.4	30.0	6.7	13.0
NON WORKING	95.4	94.2	59.3	90.8	92.5	93.3	80.6	70.0	93.3	87.0
Occupation of Patient										
UNSKILLED WORKER	60	25	2	8	22	25	35	8	10	29
SKILLED WORKER	0	25	8	25	56	25	25	28	70	43
CLERICAL/SALES	20.0	0.0	20.8	8.3	0.0	12.5	15.0	11.1	0.0	0.0
BUSINESS/MANAGERIAL	0.0	37.5	39.6	25.0	0.0	25.0	5.0	27.8	0.0	14.3
PROFESSIONAL	0.0	0.0	6.3	8.3	22.2	0.0	15.0	0.0	20.0	14.3
HOUSEWORK	20.0	0.0	16.7	0.0	0.0	0.0	0.0	11.1	0.0	0.0
STUDENT	0.0	12.5	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OTHER	0.0	0.0	2.1	25.0	0.0	12.5	0.0	13.9	0.0	0.0
Total	5.0	8.0	48.0	12.0	9.0	8.0	20.0	36.0	10.0	14.0
Income category of patient										
APL	16.7	25.8	57.6	37.5	10.8	31.7	41.7	70.8	5	13.9
BPL	81.5	47.5	32.2	42.5	85	60.8	57.3	29.2	95	86.1
ANTHYODA	1.9	0	10.2	19.2	4.2	7.5	1	0	0	0
OTHER	0	26.7	0	0.8	0	0	0	0	0	0
Total	108	120	118	120	120	120	103	120	120	108

Table 4.1d: Individual Characteristics of respondents in the group of States classified by Mode of implementation of PMNDP

Individual Characteristics	In-House					Hybrid	State-run In-House
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Current Work status							
WORKING	18.3	3.3	26.1	4.6	12.5	12.1	10.8
NON WORKING	81.7	96.7	73.9	95.4	87.5	87.9	89.2
Occupation of Patient							
UNSKILLED WORKER	35	20	38	20	20	8	8
SKILLED WORKER	20	40	10	0	33	8	31
CLERICAL/SALES	0.0	0.0	3.4	20.0	0.0	8.3	7.7
BUSINESS/MANAGERIAL	40.0	20.0	6.9	0.0	40.0	58.3	30.8
PROFESSIONAL	5.0	0.0	3.4	20.0	6.7	8.3	23.1
HOUSEWORK	0.0	0.0	34.5	0.0	0.0	0.0	0.0
STUDENT	0.0	0.0	3.4	0.0	0.0	0.0	0.0
OTHER	0.0	20.0	0.0	40.0	0.0	8.3	0.0
Total							
Income category of patient							
APL	62.4	0.0	26.1	33.3	66.7	87.9	25.8
BPL	37.6	86.7	64.0	60.2	15.0	11.1	73.3
ANTHYODA	0.0	13.3	9.9	6.5	18.3	1.0	0.0
OTHER	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Total	20	5	29	5	15	12	13

Table 4.2a Percentage distribution of respondents by Behavioural Characteristics in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
Behavioural Characteristics	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Ever consumed alcohol	13.9	33.3	9.3	10.0	10.8	24.2	28.2	36.7	35.0	40.7
Smoke or use any form of tobacco	21.3	24.2	35.6	18.3	10.0	6.7	16.5	25.0	21.7	19.4
Total	108	120	118	120	120	120	103	120	120	108

Table 4.2b Percentage distribution of respondents by Behavioural Characteristics in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State-run
Behavioural Characteristics	Guj	TN	Mah	J & K	Pun	Raj	Ker
Ever consumed alcohol	20.2	45.8	17.1	0.0	25.0	15.2	35.8
Smoke or use any form of tobacco	10.1	21.7	18.0	14.8	20.8	24.2	31.7
Total	109	120	111	108	120	99	120

MORBIDITY

Table 5.1a: Percentage distribution of respondents by Morbidity at the onset of kidney disease in the group of States classified by mode of Implementation of PMNDP

Morbidity	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Disease suffered/suffering										
DIABETES	47.2	26.7	67.8	24.2	55.8	25.8	17.5	42.5	37.5	26.9
HYPERTENSION	86.1	82.5	72.0	70.8	75.8	57.5	68.0	88.3	96.7	78.7
CARDIOVASCULARDISEASE	5.6	11.7	0.0	8.3	5.0	17.5	7.8	5.0	5.8	5.6
LIVER DISEASE	3.7	6.7	17.8	13.3	3.3	6.7	1.0	0.0	2.5	1.9
RENAL STONE	3.7	5.8	2.5	8.3	2.5	11.7	0.0	10.8	0.8	40.7
URINARY TRACT INFECTIONS	19.4	15.0	0.0	13.3	7.5	11.7	0.0	1.7	32.5	21.3
BREATHLESSNESS/ASTHMA	19.4	16.7	0.0	10.8	3.3	25.0	4.9	18.3	19.2	12.0
COVID19	0.0	2.5	0.0	1.7	1.7	6.7	0.0	0.8	15.8	0.9
JAUNDICE	0.0	3.3	4.2	3.3	1.7	6.7	0.0	3.3	7.5	0.9
TUBERCULOSIS	0.9	5.0	0.0	0.0	0.0	5.0	1.0	0.0	6.7	0.9
CANCER	0.0	0.0	0.0	0.8	0.0	0.8	0.0	0.8	0.0	0.9
OTHERS	12.0	8.3	0.8	5.0	0.0	10.8	32.0	9.2	0.0	4.6
Total	108	120	118	120	120	120	103	120	120	108

Table 5.1b: Percentage distribution of respondents by Morbidity at the onset of kidney disease in the group of States classified by mode of Implementation of PMNDP

Morbidity	In-House					Hybrid	State-run In-House
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Disease suffered/suffering							
DIABETES	34.9	30.8	39.6	35.2	22.5	37.4	61.7
HYPERTENSION	91.7	89.2	65.8	81.5	61.7	3.0	100.0
CARDIOVASCULARDISEASE	10.1	5.8	3.6	17.6	3.3	3.0	29.2
LIVER DISEASE	1.8	3.3	9.9	2.8	18.3	1.0	5.0
RENAL STONE	19.3	5.0	16.2	0.9	7.5	5.1	10.8
URINARY TRACT INFECTIONS	15.6	10.8	13.5	12.0	8.3	8.1	7.5
BREATHLESSNESS/ASTHMA	22.9	31.7	9.0	12.0	15.0	1.0	43.3
COVID19	5.5	0.8	7.2	0.0	6.7	24.2	41.7
JAUNDICE	1.8	5.0	2.7	0.0	1.7	0.0	5.0
TUBERCULOSIS	0.0	2.5	2.7	0.0	0.0	0.0	3.3
CANCER	0.0	0.0	0.9	0.0	0.0	0.0	2.5
OTHERS	2.8	11.7	2.7	23.1	5.0	29.3	19.2
Total	109	120	111	108	120	99	120

Table 5.2a: Percentage distribution of respondents by Kidney disease duration and consultation in the group of States classified by mode of Implementation of PMNDP

Kidney Disease : Duration and Consultation	PPP Mode									
Kidney Disease	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
<i>Mean Duration of Kidney Disease</i>	2.7	3.5	2	3.5	4.2	4.3	4.1	3.4	3.2	4.5
Ever consulted Nephrologist										
NO	5.6	25.0	6.8	10.8	10.8	6.7	0.0	0.0	0.8	0.0
YES FROM PRIVATE SECTOR	69.4	22.5	50.0	54.2	80.8	48.3	70.9	31.7	93.3	81.5
YES FROM PUBLIC SECTOR	20.4	45.8	32.2	23.3	3.3	25.8	24.3	68.3	5.0	11.1
YES BOTH PUB & PVT	4.6	6.7	11.0	11.7	5.0	19.2	4.9	0.0	0.8	7.4
Consultation before or After diagnosis										
BEFORE	11.8	35.2	45.5	31.5	80.4	42.9	2.9	0.0	25.9	25.9
AFTER	88.2	64.8	54.5	68.5	19.6	57.1	97.1	100.0	74.1	74.1
Total	102	91	110	108	107	112	103	120	108	108
Nephrologist opinion time after disease onset										
WITHIN 1 MONTH	83.3	50.0	66.7	74.3	66.7	69.2	92.0	85.0	50.0	65.0
MORE THAN 1 MONTH	16.7	50.0	33.3	25.7	33.3	30.8	8.0	15.0	50.0	35.0
Reason for Delay in seeking Nephrologists opinion										
NO DELAY	26.7	43.8	70.0	45.0	71.4	65.0	0.0	0.0	0.0	17.9
NOT REFERRED DESPITE DIAGNOSIS	26.7	43.8	0.0	35.0	0.0	20.0	0.0	#REF!	100.0	0.0
COULD NOT COME DESPITE REFERRAL DUE TO LONG DISTANCE	6.7	3.1	0.0	15.0	14.3	5.0	12.5	72.2	0.0	10.7
COULD NOT COME DESPITE REFERRAL DUE TO FINANCIAL CONSTRAINTS	60.0	12.5	40.0	25.0	28.6	10.0	25.0	0.0	33.3	25.0
COULD NOT COME DESPITE REFERRAL DUE TO COVID RESTRICTIONS	13.3	3.1	15.0	5.0	0.0	10.0	0.0	0.0	66.7	0.0
NO NEPROLOGIST FOR CONSULTATION	6.7	12.5	0.0	5.0	0.0	10.0	12.5	27.8	33.3	10.7
OTHER	6.7	9.4	5.0	0.0	0.0	5.0	62.5	0.0	0.0	3.6
Total	15	32	20	20.0	7.0	20	8	18	3.0	28

Table 5.2b: Percentage distribution of respondents by Kidney disease duration and consultation in the group of States classified by mode of Implementation of PMNDP

Kidney Disease: Duration and Consultation	In-House					Hybrid	State-run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
<i>Mean Duration of Kidney Disease</i>	5.0	3.1	4.3	5.4	6.4	1.3	6.0
Ever consulted Nephrologist							
NO	0.0	0.0	10.8	12.0	2.5	1.0	0.0
YES FROM PRIVATE SECTOR	60.6	70.8	60.4	38.9	60.0	29.3	52.5
YES FROM PUBLIC SECTOR	18.3	24.2	25.2	49.1	29.2	31.3	47.5
YES BOTH PUB & PVT	21.1	5.0	3.6	0.0	8.3	38.4	0.0
Consultation before or After diagnosis							
BEFORE	12.8	0.0	9.1	78.9	29.9	83.7	67.5
AFTER	87.2	100.0	90.9	21.1	70.1	16.3	32.5
Total							
Nephrologist opinion time after disease onset							
WITHIN 1 MONTH	89.5	97.5	73.3	90.0	84.5	100.0	82.1
MORE THAN 1 MONTH	10.5	2.5	26.7	10.0	15.5	0.0	17.9
Reason for Delay in seeking Nephrologists opinion							
NO DELAY	50.0	0.0	58.3	0.0	64.3	-	14.3
NOT REFERRED DESPITE DIAGNOSIS	20.0	0.0	29.2	0.0	35.7	-	14.3
COULD NOT COME DESPITE REFERRAL DUE TO LONG DISTANCE	30.0	33.3	16.7	50.0	7.1	-	0.0
COULD NOT COME DESPITE REFERRAL DUE TO FINANCIAL CONSTRAINTS	0.0	100.0	37.5	0.0	0.0	-	57.1
COULD NOT COME DESPITE REFERRAL DUE TO COVID RESTRICTIONS	0.0	33.3	16.7	0.0	0.0	-	0.0
NO NEPROLOGIST FOR CONSULTATION	0.0	33.3	16.7	0.0	7.1	-	42.9
OTHER	0.0	33.3	4.2	50.0	0.0	-	14.3
Total	10	3	24	2	14	-	7

Table 5.3a Percentage distribution of respondents by Symptoms of Kidney Disease in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Symptoms at onset of Disease										
FATIGUE	46.3	49.2	20.3	48.3	6.7	69.2	23.3	22.5	11.7	33.3
ANEMIA	12.0	47.5	41.5	18.3	6.7	32.5	6.8	25.0	19.2	22.2
ALLERGIC /ITCHING	53.7	18.3	10.2	9.2	15.8	15.0	5.8	45.8	12.5	22.2
SWELLING OF HANDS/LEGS	73.1	68.3	44.9	32.5	67.5	40.8	38.8	75.0	96.7	60.2
SWOLLEN FACE	26.9	48.3	35.6	37.5	44.2	29.2	29.1	59.2	34.2	38.9
TASTE PROBLEMS	36.1	46.7	3.4	21.7	32.5	13.3	3.9	35.8	0.0	15.7
STOMACH UPSETS	46.3	40.0	17.8	23.3	32.5	18.3	23.3	44.2	5.8	25.0
VOMITING	73.1	65.8	11.0	31.7	65.0	39.2	30.1	58.3	70.0	33.3
FREQUENT URINATION	15.7	30.8	28.8	6.7	11.7	15.0	1.0	9.2	45.0	19.4
FOAMY/BUBLY/ URINE/COLOUR CHANGE IN URINE	7.4	35.8	8.5	10.8	24.2	25.0	3.9	5.0	22.5	13.0
OTHER Symptoms	8.3	8.3	16.1	20.8	0.0	25.8	77.7	15.0	3.3	1.9
Total	108	120	118	120	120	120	103	120	120	108

Table 5.3b Percentage distribution of respondents by Symptoms of Kidney Disease in the group of States classified by mode of Implementation of PMNDP

Symptoms of Kidney Disease	In-House					Hybrid	State-run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Symptoms at onset of Disease							
FATIGUE	81.7	57.5	46.8	57.4	28.3	12.1	94.2
ANEMIA	62.4	19.2	44.1	13.9	23.3	0.0	55.0
ALLERGIC /ITCHING	11.9	4.2	18.0	11.1	21.7	18.2	15.8
SWELLING OF HANDS/LEGS	78.9	53.3	44.1	53.7	15.8	26.3	95.0
SWOLLEN FACE	72.5	32.5	36.9	56.5	15.0	23.2	61.7
TASTE PROBLEMS	10.1	10.0	10.8	6.5	9.2	1.0	25.8
STOMACH UPSETS	14.7	36.7	15.3	12.0	15.8	1.0	40.8
VOMITING	53.2	61.7	76.6	44.4	11.7	0.0	66.7
FREQUENT URINATION	12.8	14.2	18.9	11.1	1.7	0.0	13.3
FOAMY/BUBLY/ URINE/COLOUR CHANGE IN URINE	10.1	6.7	6.3	17.6	7.5	1.0	25.0
OTHER Symptoms	1.8	15.8	2.7	25.0	6.7	39.4	26.7
Total	109	120	111	108	120	99	120

Table 5.4a Percentage distribution of respondents by Treatment seeking Behaviour in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Seek treatment for symptoms										
YES	88.9	87.5	70.3	38.3	97.5	86.7	98.1	97.5	100.0	69.4
NO	11.1	12.5	29.7	61.7	2.5	13.3	1.9	2.5	0.0	30.6
Total	108	120	118	120	120	120	103	120	120	108
First contact facility for health care										
PRIMARY HEALTH CENTRE/UPHC	0.0	0.0	0.0	0.0	1.7	5.8	0.0	0.0	0.0	0.0
COMMUNITY HEALTH CENTRE	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.8	4.0
SUB-DIVISION HOSPITAL	4.2	8.3	0.0	0.0	0.9	10.6	1.0	0.0	6.7	0.0
DISTRICT/TERTIARY CARE HOSPITAL	17.7	45.4	34.9	28.3	4.3	26.0	14.9	26.5	3.3	13.3
PRIVATE HOSPITAL	70.8	35.2	63.9	58.7	75.2	47.1	69.3	25.6	88.3	78.7
PRIVATE DOCTOR/CLINIC	7.3	9.3	0.0	2.2	17.9	7.7	13.9	4.3	0.8	4.0
OTHERS	0.0	1.9	0.0	10.9	0.0	2.9	1.0	43.6	0.0	0.0
Total	96	108	83	46	117	104	101	117	120	75
<i>Mean Duration between onset of symptoms and seeking treatment (in Months)</i>	<i>0.4</i>	<i>1.7</i>	<i>1.4</i>	<i>0.9</i>	<i>0.1</i>	<i>0.7</i>	<i>1.0</i>	<i>0.4</i>	<i>1.0</i>	<i>0.5</i>
Reason not seeking treatment										
ILLNESS NOT SEVERE	37.5	32.6	80.9	54.1	60.0	47.5	50.0	78.9	77.8	68.1
NO TRANSPORT FACILITY	16.7	4.3	0.0	17.6	0.0	15.4	8.3	5.3	11.1	2.1
FINANCIAL CONSTRAINTS	70.8	54.3	58.8	32.1	33.3	41.0	8.3	21.1	16.7	25.5
DIDNOT WANT TO KEEP AWAY FROM WORK	4.2	2.2	0.0	6.0	0.0	17.9	16.7	0.0	5.6	0.0
NO ONE TO ACCOMPANY	12.5	8.7	0.0	3.6	11.1	10.3	0.0	0.0	0.0	2.1
AFRAID OF COVID INFECTION	0.0	8.7	25.0	3.6	0.0	17.9	8.3	10.5	16.7	0.0
OTHERS	4.2	6.5	0.0	1.2	0.0	5.1	69.2	0.0	5.6	2.1
Ever been on medication under AYUSH										
YES	16.7	35.8	33.9	37.5	15.0	38.3	37.9	28.3	6.7	15.7
Currently on AYUSH Treatment										
YES	4.6	0.8	1.7	5.0	14.2	13.3	3.9	0.8	3.3	0.9
Total	24	46	68	84	9	39	13	19	18	47

Table 5.4b Percentage distribution of respondents by Treatment seeking Behaviour in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State-run
Treatment seeking Behaviour	Guj	TN	Mah	J & K	Pun	Raj	Ker
Seek treatment for symptoms							
YES	100.0	100.0	89.2	97.2	33.3	12.1	55.8
NO	0.0	0.0	10.8	2.8	66.7	87.9	44.2
Total	109	120	111	108	120	99	120
First contact facility for health care							
PRIMARY HEALTH CENTRE/UPHC	1.8	0.0	3.0	0.0	0.0	0.0	1.5
COMMUNITY HEALTH CENTRE	1.8	0.0	0.0	2.9	0.0	66.7	0.0
SUB-DIVISION HOSPITAL	0.0	0.8	9.1	1.0	20.0	0.0	10.4
DISTRICT/TERTIARY CARE HOPSITAL	16.5	25.0	16.2	57.1	57.8	33.3	32.8
PRIVATE HOPSITAL	61.5	66.7	68.7	26.7	13.3	0.0	50.7
PRIVATE DOCTOR/CLINIC	15.6	5.0	3.0	11.4	0.0	0.0	3.0
OTHERS	2.8	2.5	0.0	1.0	2.2	0.0	1.5
Total	109	120	111	108	120	99	120
Mean Duration between onset of symptoms and seeking treatment (in Months)	0.1	0.4	1.1	0.8	0.6	0.0	2.0
Reason not seeking treatment	6	5	45	11	87	92	67
ILLNESS NOT SEVERE	83.3	80.0	24.4	72.7	57.9	96.6	86.6
NO TRANSPORT FACILITY	0.0	0.0	6.7	36.4	21.5	5.7	1.5
FINANCIAL CONSTRAINTS	33.3	80.0	66.7	36.4	15.1	2.3	52.2
DIDNOT WANT TO KEEP AWAY FROM WORK	0.0	60.0	17.8	27.3	9.8	0.0	0.0
NO ONE TO ACCOMPANY	0.0	0.0	15.6	27.3	9.8	1.1	3.0
AFRAID OF COVID INFECTION	16.7	0.0	6.7	36.4	6.5	1.1	0.0
OTHERS	0.0	80.0	0.0	9.1	2.2	0.0	0.0
Total							
Ever been on medication under AYUSH							
Yes	10.1	11.7	24.3	13.0	15.8	5.1	20.0
Currently on AYUSH Treatment							
Yes	0.9	0.8	16.2	25.9	1.7	84.8	0.0
Total	109	120	111	108	120	99	120

Table 5.5a Percentage distribution of respondents by Anthropometric Measurement in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Measured Height and Weight when first time on dialysis										
MEASURED HEIGHT (YES)	81.5	70.8	94.9	85.8	94.2	74.2	55.3	100.0	76.7	63.0
MEASURED WEIGHT (YES)	90.7	89.2	100.0	98.3	98.3	90.0	90.3	100.0	98.3	99.1
Total	108	120	118	120	120	120	103	120	120	108
BMI Category										
THIN	26.4	14.6	59.8	19.2	8.1	20.2	21.1	14.2	18.5	16.2
NORMAL	49.4	74.2	17.9	76.9	91.9	69.0	21.1	66.7	76.1	76.5
OBESE	47.2	72.5	16.9	53.3	92.5	69.2	77.7	72.5	57.5	66.7
DON'T KNOW	0.0	0.0	0.0	0.0	0.0	0.0	45.6	0.0	0.0	0.0
Total	87	89	112	104	111	84	57	120	92	68

Table 5.5b Percentage distribution of respondents by Anthropometric Measurement in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State-run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Measured Height and Weight when first time on dialysis							
MEASURED HEIGHT	100.0	100.0	33.3	15.7	62.5	100.0	95.0
MEASURED WEIGHT	100.0	100.0	44.1	99.1	91.7	100.0	93.3
Total	109	120	111	108	120	99	120
BMI Category							
THIN	33.9	9.2	8.0	17.6	10.7	7.1	11.1
NORMAL	60.6	67.5	84.0	58.8	86.7	72.7	76.9
OBESE	5.5	23.3	8.0	23.5	2.7	20.2	12.0
Total	109	120	25	17	75	99	108

Table 5.6a Percentage distribution of respondents by details on Kidney transplantation in the group of States classified by mode of Implementation of PMNDP

Kidney Transplantation	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Doctor recommended transplantation										
YES	47.2	72.5	16.9	53.3	92.5	69.2	77.7	72.5	57.5	66.7
NO	52.8	27.5	83.1	46.7	7.5	30.8	22.3	27.5	42.5	33.3
Total	108	120	118	120	120	120	103	120	120	108
Ever tried for transplantation										
YES	52.9	73.9	15.0	53.8	12.6	44.0	38.8	70.1	82.6	59.7
NO	47.1	26.1	85.0	46.2	87.4	56.0	61.3	29.9	17.4	40.3
Total	108	120	118	120	120	120	103	120	120	108
Difficulty faced in transplantation										
FACED NO DIFFICULTY	7.4	4.6	0.0	60.0	21.4	21.6	18.8	8.2	10.5	14.0
COULDN'T FIND A DONOR	77.8	55.4	100.0	57.1	42.9	40.5	53.1	85.2	87.7	72.1
FINANCIAL DIFFICULTIES	74.1	60.0	0.0	68.6	92.9	64.9	40.6	31.1	91.2	62.8
THINK IT IS NOT A FINAL TREATMENT	59.3	23.1	0.0	31.4	7.1	13.5	3.1	6.6	1.8	2.3
DIDN'T WANT ANY FAMILY MEMBER TO SUFFER BY DONATING	33.3	40.0	33.3	14.3	7.1	8.1	16.1	0.0	1.8	18.6
COMPATABILITY ISSUES WITH KIDNEY DONATED	11.1	9.2	0.0	17.1	0.0	5.4	0.0	0.0	1.8	9.3
FEAR OF SIDE EFFECT	7.4	29.2	0.0	25.7	7.1	13.5	9.7	8.2	1.8	9.3
OTHER	0.0	6.1	0.0	0.0	0.0	5.3	35.5	6.6	1.8	2.3
Total	51	88	20	65	111	84	80	87	69	72

Table 5.6b Percentage distribution of respondents by details on Kidney transplantation in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State-run
Kidney Transplantation	Guj	TN	Mah	J & K	Pun	Raj	Ker
Doctor recommended transplantation							
YES	68.8	41.7	55.9	68.5	44.2	11.1	60.8
NO	31.2	58.3	44.1	31.5	55.8	88.9	39.2
Total	109	120	111	108	120	99	120
Ever tried for transplantation							
YES	66.2	66.0	51.6	82.4	77.8	9.1	37.0
NO	33.8	34.0	48.4	17.6	22.2	90.9	63.0
Total	77	50	62	74	54	11	73
Difficulty faced in transplantation							
FACED NO DIFFICULTY	0.0	0.0	28.1	50.8	90.5	0.0	25.9
COULDN'T FIND A DONOR	6.5	8.8	5.3	9.5	8.1	0.0	4.8
FINANCIAL DIFFICULTIES	39.2	93.9	50.0	83.6	78.6	0.0	40.7
THINK IT IS NOT A FINAL TREATMENT	5.9	3.0	34.4	3.3	42.9	100.0	0.0
DIDN'T WANT ANY FAMILY MEMBER TO SUFFER BY DONATING	19.6	81.8	6.3	1.6	23.8	0.0	3.7
COMPATABILITY ISSUES WITH KIDNEY DONATED	2.0	3.0	15.6	3.3	16.7	0.0	0.0
FEAR OF SIDE EFFECT	9.8	12.1	31.3	13.1	7.1	0.0	0.0
OTHER	0.0	15.2	6.3	1.6	0.0	0.0	14.8
Total	51	33	32	61	42	1	27

PROCESS DIMENSION

Table 6.1a: Percentage distribution of respondents by duration of haemodialysis and registration for dialysis in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
Duration of Haemodialysis	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
<i>Mean duration since first Haemodialysis (in years)</i>	2.2	2.5	1.5	2.7	2.4	2.8	2.8	2.3	2.8	3.4
<i>Mean number of dialysis till now</i>	220	246	129	256	174	301	238	210	335	412
Total	108	120	118	120	120	120	103	120	120	108
Registration for Dialysis										
Any difficulty in registration										
YES	9.3	22.5	5.1	4.2	18.3	5.0	4.9	0.0	1.7	5.6
Total	108	120	118	120	120	120	103	120	120	108
Type of Difficulty										
PROCESS TOO LONG	40.0	85.2	0.0	22.2	15.4	50.0	0.0	100.0	66.7	0.0
REQUIRE MANY DOCUMENTATION	70.0	82.1	0.0	28.6	18.2	66.7	16.7	66.7	16.7	0.0
LONG WAITING TIME FOR REGISTRATION	70.0	63.0	66.7	28.6	13.6	50.0	33.3	66.7	66.7	0.0
BED NOT AVAILABLE	10.0	48.1	100.0	42.9	4.5	0.0	50.0	66.7	50.0	0.0
OTHER REASONS	10.0	0.0	0.0	28.6	0.0	0.0	33.3	0.0	0.0	5.4
Total	10	27	6	5	22	6	5	0	2	6

Table 6.1b: Percentage distribution of respondents by duration of haemodialysis and registration for dialysis in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State-run
Duration of Haemodialysis	Guj	TN	Mah	J & K	Pun	Raj	Ker
<i>Mean duration since first Haemodialysis in Years</i>	4.1	2.6	3.7	3.3	2.5	1.0	3.6
<i>Mean number of dialysis till now</i>	507	219	305	312	140	88	375
Total	109	120	111	108	120	99	120
Registration for Dialysis*							
Any difficulty in registration							
YES	0.0	0.8	11.7	4.6	0.0	0.0	0.8
Total	109	120	111	108	120	99	120

(*Very few patients had difficulty in registration so reason not included in table)

Table 6.2a Percentage distribution of respondents by choice and change of dialysis centre in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
Choice of Dialysis centre	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Place of first dialysis										
TERITIARY LEVEL HOSPITAL (MCH)	13.0	7.5	37.3	0.8	0.8	7.5	19.4	0.0	0.8	0.0
DISTRICT HOSPITAL	13.0	39.2	9.3	18.3	15.8	42.5	6.8	15.0	2.5	12.0
SUB DIVISIONAL HOSPITAL	5.6	5.0	0.0	0.8	0.0	3.3	0.0	0.0	0.0	0.0
COMMUNITY HEALTH CENTRE/UHC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7
PRIVATE HOSPITAL	68.5	44.2	53.4	67.5	78.3	35.8	71.8	30.8	96.7	73.1
PRIVATE DOCTOR/CLINIC	0.0	4.2	0.0	0.0	5.0	8.3	0.0	1.7	0.0	0.0
OTHERS	0.0	0.0	0.0	12.5	0.0	1.7	1.9	52.5	0.0	0.0
Total	108	120	118	120	120	120	103	120	120	108
Ever changed dialysis centre										
YES	92.6	93.3	88.1	77.5	87.5	58.3	97.1	81.7	97.5	90.7
NO	7.4	6.7	11.9	22.5	12.5	41.7	2.9	18.3	2.5	9.3
Total	108	120	118	120	120	120	103	120	120	108
No. of times changed										
1	74.0	30.4	95.2	53.2	65.7	67.1	18.0	56.1	90.6	61.2
2 or more	26.0	69.6	4.8	46.8	34.3	32.9	82.0	43.9	9.4	38.8
Total	100	112	104	94	105	70	100	98	117	98
Reason for change in dialysis centre										
NOT AFFORDABLE	79.0	67.9	64.4	88.3	94.3	84.3	72.0	55.1	92.3	58.2
DISTANT FROM RESIDENCE	85.0	45.5	96.2	70.2	76.2	55.7	82.0	95.9	77.8	68.4
INCONVENIENT TIME OF DIALYSIS SESSIONS	52.0	17.9	1.9	24.5	0.0	10.0	2.0	10.2	23.9	22.4
LACK OF TRANSPORTATION FACILITIES	37.0	20.5	9.6	27.7	6.7	25.7	5.0	17.3	4.3	34.7
LONG WAITING TIME FOR DIALYSIS	24.0	17.0	29.8	18.1	0.0	14.3	5.0	9.2	0.9	7.1
LACK OF COOPERATION FROM STAFF	6.0	8.9	0.0	3.2	1.0	1.4	2.0	5.1	0.0	7.1
LACK OF PROPER FACILITIES	10.0	20.5	1.0	8.5	1.9	2.9	8.0	7.1	0.9	9.2
CANNOT CLAIM INSURANCE BENEFITS	1.0	1.8	1.0	3.2	1.0	0.0	7.0	9.2	0.9	0.0
OTHERS	2.0	4.5	0.0	1.1	0.0	4.3	19.0	2.0	0.0	3.1
Total	100	112	104	94	105	70	100	98	117	98
Reason to choose this centre										
FREE TREATMENT	92.6	87.5	97.5	98.3	99.2	86.7	77.7	89.2	97.5	97.2
NEAR MY HOME	88.9	68.3	99.2	74.2	89.2	58.3	89.3	98.3	98.3	72.2
CAN AVAIL INSURANCE BENEFIT	5.6	3.3	0.0	7.5	8.3	16.7	35.9	76.7	1.7	0.9
BETTER FACILITIES	70.4	46.7	3.4	73.3	85.8	47.5	44.7	90.0	0.0	54.6
NO ALTERNATE AVAILABILITY	21.3	2.5	9.3	20.8	2.5	15.8	22.3	59.2	2.5	4.6
GOOD CARE	83.3	65.0	5.9	78.3	90.8	78.3	42.7	90.8	69.2	67.6
LESS TRANSPORT COST	63.0	40.0	96.6	45.0	6.7	32.5	40.8	86.7	78.3	50.0
FREE MEDICINES	58.3	16.7	28.0	39.2	16.7	18.3	32.0	53.3	0.0	37.0
OTHER	0.9	0.8	0.0	0.8	0.0	3.3	13.6	0.0	0.0	0.0
Total	108	120	118	120	120	120	103	120	120	108

Table 6.2b Percentage distribution of respondents by choice and change of dialysis centre in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State-run
Choice of Dialysis centre	Guj	TN	Mah	J & K	Pun	Raj	Ker
Place of first dialysis							
TERITIARY LEVEL HOSPITAL (MCH)	5.5	35.8	0.0	51.9	16.7	32.3	29.2
DISTRICT HOSPITAL	2.8	6.7	25.2	2.8	10.8	32.3	10.8
SUB DIVISIONAL HOSPITAL	0.0	6.7	5.4	0.0	5.0	0.0	1.7
COMMUNITY HEALTH CENTRE/UHC	0	0	0	0	0	0	0
PRIVATE HOSPITAL	68.8	49.2	68.5	42.6	65.8	35.4	58.3
PRIVATE DOCTOR/CLINIC	3.7	1.7	0.0	0.0	0.0	0.0	0.0
OTHERS	19.3	0.0	0.9	2.8	1.7	0.0	0.0
Total	109	120	111	108	120	99	120
Ever changed dialysis centre							
YES	100.0	86.7	80.2	94.4	63.3	87.9	88.3
NO	0.0	13.3	19.8	5.6	36.7	12.1	11.7
Total	109	120	111	108	120	99	120
No. of times changed							
1	80.7	82.7	41.6	30.4	49.4	96.6	35.8
2 or more	19.3	17.3	58.4	69.6	50.6	3.4	64.2
Total	109	104	89	102	77	87	106
Reason for change in dialysis centre	Guj	TN	Mah	J & K	Pun	Raj	Ker
NOT AFFORDABLE	66.1	81.7	66.3	80.4	68.8	35.6	98.1
DISTANT FROM RESIDENCE	89.0	83.7	69.7	93.1	79.2	100.0	28.3
INCONVENIENT TIME OF DIALYSIS SESSIONS	9.2	18.3	34.8	29.4	27.3	21.8	12.3
LACK OF TRANSPORTATION FACILITIES	15.6	5.8	32.6	40.2	15.6	37.9	3.8
LONG WAITING TIME FOR DIALYSIS	9.2	20.2	29.2	8.8	23.4	29.9	3.8
LACK OF COOPERATION FROM STAFF	11.0	0.0	9.0	3.9	10.4	9.2	0.9
LACK OF PROPER FACILITIES	11.0	0.0	14.6	18.6	9.1	4.6	3.8
CANNOT CLAIM INSURANCE BENEFITS	35.8	46.2	10.1	31.4	0.0	3.4	1.9
OTHERS	0.9	1.9	1.1	0.0	2.6	0.0	2.8
Total	109	104	89	102	77	87	106
Reason to choose this centre							
FREE TREATMENT	96.3	96.7	91.9	100.0	94.2	55.6	98.3
NEAR MY HOME	95.4	95.8	48.6	93.5	90.0	97.0	20.8
CAN AVAIL INSURANCE BENEFIT	80.7	95.8	17.1	63.9	25.8	39.4	8.3
BETTER FACILITIES	56.9	65.0	54.1	2.8	54.2	26.3	62.5
NO ALTERNATE AVAILABILITY	44.0	47.5	7.2	3.7	25.0	16.2	7.5
GOOD CARE	66.1	77.5	70.3	92.6	65.0	23.2	98.3
LESS TRANSPORT COST	65.1	92.5	29.7	53.7	55.8	61.6	11.7
FREE MEDICINES	79.8	90.0	61.3	19.4	36.7	3.0	71.7
OTHER	0.0	0.8	0.0	0.9	6.7	0.0	0.8
Total	109	120	111	108	120	99	120

Table 6.3a Percentage distribution of respondents by Dialysis Schedule, frequency of dialysis in the group of States classified by mode of Implementation of PMNDP

State	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Present dialysis schedule										
MORNING	50.0	42.5	37.3	29.2	65.0	53.3	58.3	62.5	37.5	42.6
AFTERNOON	37.0	47.5	39.0	48.3	24.2	41.7	37.9	29.2	37.5	36.1
EVENING	11.1	10.0	23.7	22.5	8.3	5.0	1.0	8.3	25.0	15.7
OTHERS	1.9	0.0	0.0	0.0	2.5	0.0	2.9	0.0	0.0	5.6
Total	108	120	118	120	120	120	103	120	120	108
Frequency of dialysis in a week										
ONCE A WEEK	0.9	0.0	0.8	0.0	1.7	5.0	5.8	1.7	1.7	0.0
TWICE A WEEK	51.9	42.5	87.3	46.7	85.0	74.2	67.0	85.0	56.7	15.7
THRICE A WEEK	47.2	57.5	11.9	53.3	13.3	20.8	27.2	13.3	41.7	83.3
OTHERS	0	0	0	0	0	0	0	0	0	0.93
Convenience of dialysis schedule										
YES	96.3	93.3	94.9	91.7	96.7	95.8	97.1	98.3	95.8	99.1
NO	3.7	6.7	5.1	8.3	3.3	4.2	2.9	1.7	4.2	0.9
Total	108	120	118	120	120	120	103	120	120	108
Reason for inconvenience										
TIME INCONVENIENT TO REACH	50.0	12.5	33.3	66.7	60.0	40.0	50.0	0.0	62.5	100.0
NO TRANSPORTATION	25.0	25.0	16.7	33.3	40.0	20.0	25.0	100.0	25.0	0.0
BYSTANDER NOT ABLE TO COME DUE TO TIMINGS	25.0	62.5	50.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0
OTHERS	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Total	4	8	6	12	5	5	4	2	8	1

Table 6.3b Percentage distribution of respondents by Dialysis Schedule, frequency of dialysis in the group of States classified by mode of Implementation of PMNDP

State	In-House					Hybrid	State-run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Present dialysis schedule							
MORNING	76.1	49.2	50.5	68.5	82.5	61.6	50.8
AFTERNOON	23.9	45.0	45.9	20.4	15.0	37.4	36.7
EVENING	0.0	5.8	3.6	11.1	2.5	1.0	9.2
OTHERS	0.0	0.0	0.0	0.0	0.0	0.0	3.3
Frequency of dialysis in a week							
ONCE A WEEK	1.8	5.8	3.6	6.5	5.0	10.1	2.5
TWICE A WEEK	58.7	82.5	91.9	82.4	90.8	79.8	30.0
THRICE A WEEK	39.4	11.7	4.5	11.1	4.2	10.1	66.7
OTHERS	0	0	0	0	0	0	0.8
Convenience of dialysis schedule							
YES	99.1	99.2	96.4	100.0	97.5	100.0	95.8
NO	0.9	0.8	3.6	0.0	2.5	0.0	4.2
Total	109	120	111	108	120	99	120
Reason for inconvenience							
TIME INCONVENIENT TO REACH	0.0	0.0	0.0	-	25.0	-	0.0
NO TRANSPORTATION	0.0	100.0	25.0	-	25.0	-	80.0
BYSTANDER NOT ABLE TO COME DUE TO TIMINGS	100.0	0.0	50.0	-	25.0	-	0.0
Total	1.0	1.0	4.0	-	4.0	-	5.0

Table 6.4a Percentage distribution of respondents by Dialysis Schedule, Regularity in taking medicines in the group of States classified by mode of Implementation of PMNDP

State	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Lack of interest to go to dialysis centre										
YES	3.7	33.3	12.7	19.2	4.2	5.8	8.7	5.8	0.8	6.5
NO	96.3	66.7	87.3	80.8	95.8	94.2	91.3	94.2	99.2	93.5
Dialysis missed last month										
NOT MISSED	93.5	77.5	89.8	76.7	97.5	94.2	94.2	95.0	98.3	88.0
1 OR MORE	6.5	22.5	10.2	23.3	2.5	5.8	5.8	5.0	1.7	12.0
Total	108	120	118	120	120	120	103	120	120	108
Reason for missing dialysis										
NO TRANSPORTATION	14.3	7.4	16.7	10.7	40.0	25.0	0.0	0.0	0.0	0.0
NO ONE TO ACCOMPANY	14.3	7.4	83.3	35.7	20.0	0.0	0.0	0.0	50.0	23.1
HOUSEHOLD RESPONSIBILITIES	14.3	40.7	25.0	28.6	0.0	37.5	50.0	16.7	50.0	46.2
ANOTHER MEDICAL APPOINTMENT	0.0	55.6	0.0	39.3	40.0	12.5	50.0	33.3	0.0	15.4
COVID-19 LOCKDOWN	0.0	3.7	16.7	0.0	20.0	0.0	0.0	0.0	0.0	0.0
STAFF NOT AVAILABLE AT THE CENTRE	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0
OTHER	85.7	3.7	0.0	17.9	0.0	14.3	50.0	50.0	0.0	30.8
Total	7	27	12	28	3	7	6	6	2	13
Regularity in taking medicines										
REGULAR	96.3	94.2	97.5	97.5	100.0	95.8	92.2	97.5	100.0	99.1
NOT REGULAR	3.7	5.8	2.5	2.5	0.0	4.2	7.8	2.5	0.0	0.9
Total	108	120	118	120	120	120	103	120	120	108
Times you missed medicines										
SOMETIMES	75.0	37.5	0.0	33.3	0.0	50.0	25.0	66.7	0.0	0.0
NEVER	25.0	50.0	100.0	66.7	0.0	33.3	62.5	33.3	0.0	100.0
RARELY	0.0	12.5	0.0	0.0	0.0	16.7	12.5	0.0	0.0	0.0
Total	4	8	3	3	0	6	8	3	0	1
Difficulties to get medicines										
NO DIFFICULTIES	88.0	35.0	50.8	74.2	33.3	72.5	93.2	51.7	1.7	82.4
NOT AVAILABLE	1.9	57.5	0.0	4.2	61.7	13.3	3.9	11.7	0.0	0.9
NOT AVAILABLE FREE OF COST	9.3	5.8	39.8	20.8	5.0	10.8	2.9	36.7	98.3	16.7
OTHERS	0.9	1.7	9.3	0.8	0.0	3.3	0.0	0.0	0.0	0.0
Total	108	120	118	120	120	120	103	120	120	108

Table 6.4a Percentage distribution of respondents by Dialysis Schedule, Regularity in taking medicines in the group of States classified by mode of Implementation of PMNDP

State	In-House					Hybrid	State-run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Lack of interest to go to dialysis centre							
YES	3.7	2.5	7.2	3.7	17.5	0.0	5.0
NO	96.3	97.5	92.8	96.3	82.5	100.0	95.0
Dialysis missed last month							
Not missed	99.1	96.7	85.6	96.3	80.8	100.0	95.0
1 or more	0.9	3.3	14.4	3.7	19.2	0.0	5.0
Total	109	120	111	108	120	99	120
Reason for missing dialysis							
NO TRANSPORTATION	0.0	25.0	37.5	0.0	43.5	-	0.0
NO ONE TO ACCOMPANY	0.0	25.0	25.0	25.0	69.6	-	16.7
HOUSEHOLD RESPONSIBILITIES	0.0	0.0	37.5	0.0	17.4	-	16.7
ANOTHER MEDICAL APPOINTMENT	100.0	50.0	6.3	25.0	30.4	-	16.7
COVID-19 LOCKDOWN	0.0	0.0	18.8	0.0	0.0	-	0.0
STAFF NOT AVAILABLE AT THE CENTRE	0.0	0.0	0.0	25.0	4.3	-	0.0
OTHER	0.0	50.0	31.3	25.0	4.3	-	50.0
Total	1	4	16	4	23	-	6
Regularity in taking medicines							
REGULAR	99.1	99.2	93.7	80.6	100.0	100.0	99.2
NOT REGULAR	0.9	0.8	6.3	19.4	0.0	0.0	0.8
Total	109	120	111	108	99	99	120
Times you missed medicines							
MOST OF THE TIME	0.0	0.0	14.3	19.0	-	-	0.0
SOMETIMES	0.0	100.0	28.6	81.0	-	-	100.0
RARELY	100.0	0.0	57.1	0.0	-	-	0.0
Total	1	1	7	21	-	-	1
Difficulties to get medicines							
NO DIFFICULTIES	91.7	80.8	60.4	11.1	77.5	75.8	18.3
NOT AVAILABLE	8.3	19.2	19.8	73.1	17.5	2.0	0.8
NOT AVAILABLE FREE OF COST	0.0	0.0	18.9	13.9	5.0	22.2	2.5
OTHERS	0.0	0.0	0.9	1.9	0.0	0.0	78.3
Total	109	120	111	108	120	99	120

ECONOMIC DIMENSION

Table 7.1a Percentage distribution of respondents by mode of transportation and mean expenditure in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Type of transportation used to reach Dialysis Centre										
OWN VEHICLE	23.1	33.3	32.2	38.3	8.3	37.5	68.0	27.5	27.5	40.7
PUBLIC TRANSPORT	56.5	40.0	50.8	42.5	85.8	35.0	21.4	35.0	27.5	47.2
PAID TRANSPORT	18.5	20.8	16.9	19.2	5.8	25.8	9.7	35.0	45.0	11.1
OTHERS VEHICLE	1.9	5.8	0.0	0.0	0.0	1.7	1.0	2.5	0.0	0.9
Type of Transportation used last time										
OWN VEHICLE	23.1	32.5	32.2	38.3	8.3	35.0	70.9	27.5	25.8	40.7
PUBLIC TRANSPORT	54.6	36.7	51.7	41.7	85.0	35.8	18.4	35.0	19.2	46.3
PAID TRANSPORT	20.4	22.5	16.1	20.0	6.7	28.3	9.7	35.0	55.0	12.0
OTHER	1.9	8.3	0.0	0.0	0.0	0.8	1.0	2.5	0.0	0.9
Mean expenditure during the last month for dialysis treatment										
TRANSPORTATION	2143	1309	3736	2114	864	1861	1376	2136	961	1598
MEDICINES	2207	2583	2219	3304	3687	3304	2132	3754	4858	3204
BLOOD DIAGNOSTICS	624	858	0	919	1363	806	390	191	1389	725
SCANNING OR X-RAY	314	483	0	73	69	84	158	17	502	265
CONSUMABLES	211	582	0	1600	128	49	53	0	8	116
OTHERS	28	256	0	0	0	5	465	525	0	0
Total	108	120	118	120	120	120	103	120	120	108

Table 7.1b Percentage distribution of respondents by mode of transportation and mean expenditure in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State-run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Type of transportation used to reach Dialysis Centre							
OWN VEHICLE	38.5	21.7	28.8	15.7	47.5	83.8	27.5
PUBLIC TRANSPORT	8.3	49.2	48.6	50.9	41.7	15.2	14.2
PAID TRANSPORT	52.3	29.2	18.9	32.4	10.8	1.0	55.8
OTHERS VEHICLE	0.9	0.0	3.6	0.9	0.0	0.0	2.5
Type of Transportation used last time							
OWN VEHICLE	39.4	21.7	27.0	16.7	47.5	83.8	26.7
PUBLIC TRANSPORT	7.3	43.3	51.4	50.0	41.7	15.2	14.2
PAID TRANSPORT	52.3	35.0	18.0	32.4	10.8	1.0	56.7
OTHER	0.9	0.0	3.6	0.9	0.0	0.0	2.5
Mean expenditure during the last month for dialysis treatment							
TRANSPORTATION	1320	1908	2763	937	2325	2277	1018
MEDICINES	648	93	2160	989	4549	2279	3047
BLOOD DIAGNOSTICS	16	7	231	350	1329	20	318
SCANNING OR X-RAY	0	0	17	98	91	30	200
CONSUMABLES	0	256	0	260	19	823	470
OTHERS	337	0	0	0	0	0	1
Total	109	120	111	108	120	99	120

Table 7.2a Percentage distribution of respondents by Financial Burden in the group of States classified by mode of Implementation of PMNDP

State	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Sold land or belongings										
NO	88.0	65.8	79.7	74.2	20.0	58.3	77.7	97.5	92.5	68.5
YES BEFORE AVAILING PMNDP SERVICE	9.3	27.5	16.9	24.2	78.3	27.5	20.4	1.7	4.2	17.6
YES AFTER AVAILING PMNDP SERVICE	2.8	6.7	3.4	1.7	1.7	14.2	1.9	0.8	3.3	13.9
Borrowed money for dialysis										
DID NOT BORROW	29.6	39.2	40.7	43.3	10.0	41.7	34.0	73.3	6.7	35.2
FROM BANK	12.0	5.0	1.7	10.8	0.8	5.8	4.9	4.2	0.8	2.8
FROM RELATIVE/FRIENDS	54.6	55.0	43.2	44.2	89.2	50.8	50.5	22.5	85.8	62.0
FROM OTHER INSTITUTIONS	0.9	0.8	14.4	0.8	0.0	0.0	0.0	0.0	6.7	0.0
FROM ANY NGO	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
OTHERS	1.9	0.0	0.0	0.0	0.0	1.7	10.7	0.0	0.0	0.0
Borrowed amount burden to repay										
YES	97.4	81.9	100.0	88.7	97.2	93.2	92.6	87.5	100.0	100.0
Total	108	120	118	120	120	120	103	120	120	108

Table 7.2b Percentage distribution of respondents by Financial Burden in the group of States classified by mode of Implementation of PMNDP

State	In-House					Hybrid	State-run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Sold land or belongings							
NO	25.7	77.5	77.5	40.7	95.8	99.0	91.7
YES BEFORE AVAILING PMNDP SERVICE	10.1	22.5	18.9	58.3	3.3	1.0	8.3
YES AFTER AVAILING PMNDP SERVICE	64.2	0.0	3.6	0.9	0.8	0.0	0.0
Borrowed money for dialysis							
DID NOT BORROW	16.5	38.3	28.8	25.9	65.0	100.0	85.0
FROM BANK	37.6	15.8	22.5	20.4	1.7	0.0	7.5
FROM RELATIVE/FRIENDS	45.9	45.8	47.7	51.9	33.3	0.0	6.7
FROM OTHER INSTITUTIONS	0.0	0.0	0.9	0.9	0.0	0.0	0.0
OTHERS	0.0	0.0	0.0	0.9	0.0	0.0	0.8
Borrowed amount burden to repay							
YES	90.7	95.9	86.1	93.8	90.6	84.1	88.9
Total	109	120	111	108	120	99	120

Table 7.3a: Percentage distribution of respondents by Enrolment in Insurance Schemes in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Enrolled in Insurance Scheme										
YES	9.3	12.5	41.5	9.2	20.0	18.3	78.6	97.5	64.2	9.3
NO	90.7	87.5	58.5	90.8	80.0	81.7	21.4	2.5	35.8	90.7
Total	108	120	118	120	120	120	103	120	120	108
Type of Insurance enrolled										
AYUSHMAN BHARATH PMJAY	30.0	13.3	79.6	21.4	75.0	68.2	95.1	33.3	0.0	10.0
EMPLOYMENT STATE INSURANCE SCHEME	0.0	0.0	0.0	15.4	0.0	18.2	0.0	0.9	0.0	10.0
CENTRAL GOVERNMENT HEALTH SCHEME	0.0	13.3	0.0	7.7	8.3	4.5	0.0	0.0	0.0	10.0
ANY PUBLIC SECTOR INSURANCE SCHEME	10.0	6.7	14.3	46.2	0.0	0.0	0.0	0.0	2.6	20.0
ANY PRIVATE SECTOR INSURANCE SCHEME	50.0	46.7	6.1	0.0	0.0	9.1	3.7	0.0	2.6	50.0
STATE SPECIFIC SCHEMES	10.0	0.0	0.0	0.0	20.8	0.0	0.0	67.5	94.8	0.0
OTHER	0.0	40.0	0.0	30.8	12.5	0.0	1.2	0.0	0.0	0.0
Items free under insurance										
DIALYSIS SESSIONS	40.0	26.7	100.0	15.4	95.8	81.8	100.0	98.3	68.8	20.0
TESTS	30.0	20.0	100.0	15.4	58.3	22.7	81.5	94.0	0.0	10.0
MEDICINES	30.0	20.0	55.1	15.4	20.8	22.7	56.8	23.9	0.0	20.0
DIAGNOSTICS	30.0	13.3	100.0	15.4	70.8	22.7	66.7	94.0	22.1	10.0
OTHERS	20.0	5.9	8.2	0.0	0.0	9.1	1.2	0.0	62.3	0.0
Total	10	15	49	13	24	22	81	117	77	10

Table 7.3b: Percentage distribution of respondents by Enrolment in Insurance Schemes in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Enrolled in Insurance Scheme							
YES	99.1	100.0	45.9	92.6	12.5	82.8	92.5
NO	0.9	0.0	54.1	7.4	87.5	17.2	7.5
Total	109	120	111	108	120	99	120
Type of Insurance enrolled							
AYUSHMAN BHARATH PMJAY	100.0	1.7	31.4	100.0	33.3	100.0	89.2
EMPLOYMENT STATE INSURANCE SCHEME	0.0	0.0	5.9	0.9	0.0	0.0	3.6
CENTRAL GOVERNMENT HEALTH SCHEME	0.0	0.0	3.9	0.0	0.0	0.0	0.0
ANY PUBLIC SECTOR INSURANCE SCHEME	0.0	0.0	5.9	0.0	20.0	0.0	0.0
ANY PRIVATE SECTOR INSURANCE SCHEME	0.0	0.8	5.9	0.9	40.0	0.0	0.0
STATE SPECIFIC SCHEMES	0.0	100.0	58.8	0.0	0.0	0.0	7.2
OTHER	0.0	0.0	0.0	0.0	6.7	0.0	0.9
Total	108	120	51	108	15	82	111
Items free under insurance							
DIALYSIS SESSIONS	100.0	100.0	96.1	100.0	33.3	98.8	100.0
TESTS	100.0	100.0	88.2	97.2	33.3	72.0	81.1
MEDICINES	97.2	100.0	78.4	8.3	40.0	54.9	57.7
DIAGNOSTICS	97.2	100.0	43.1	41.7	33.3	69.5	61.3
OTHERS	0.0	0.0	0.0	0.9	6.7	0.0	0.0
Total	108	120	51	108	15	82	111

Social Dimension

Table 8.1a: Percentage distribution of respondents by ADL Limitations in the group of States classified by mode of Implementation of PMNDP

State	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Whether Kidney disease bothers ADL										
Ability to do normal work										
SEVERELY	55.6	15.8	52.5	33.3	5.0	26.7	25.2	20.8	28.3	23.1
SOMEWHAT	26.9	42.5	42.4	36.7	38.3	57.5	35.9	55.0	69.2	36.1
NOT AT ALL	17.6	41.7	5.1	30.0	56.7	15.8	38.8	24.2	2.5	40.7
Ability to travel										
SEVERELY	33.3	18.3	47.5	35.8	5.8	20.0	25.2	14.2	30.0	10.2
SOMEWHAT	50.9	44.2	51.7	34.2	37.5	67.5	35.9	65.8	68.3	34.3
NOT AT ALL	15.7	37.5	0.8	30.0	56.7	12.5	38.8	20.0	1.7	55.6
Being dependent on others										
SEVERELY	31.5	35.8	18.6	30.8	6.7	22.5	21.4	24.2	15.0	13.9
SOMEWHAT	43.5	50.0	45.8	50.0	15.0	57.5	35.0	55.8	72.5	31.5
NOT AT ALL	25.0	14.2	35.6	19.2	78.3	20.0	43.7	20.0	12.5	54.6
Stress or worries caused by kidney disease										
SEVERELY	48.1	57.5	14.4	38.3	4.2	34.2	37.9	15.8	14.2	24.1
SOMEWHAT	37.0	32.5	84.7	35.0	73.3	52.5	32.0	68.3	75.0	29.6
NOT AT ALL	14.8	10.0	0.8	26.7	22.5	13.3	30.1	15.8	10.8	46.3
Physical appearance										
SEVERELY	23.1	32.5	4.2	14.2	5.8	15.8	20.4	15.0	1.7	12.0
SOMEWHAT	43.5	56.7	68.6	51.7	73.3	61.7	37.9	72.5	96.7	34.3
NOT AT ALL	33.3	10.8	27.1	34.2	20.8	22.5	41.7	12.5	1.7	53.7
Ability to use washroom on your own										
SEVERELY	13.0	17.5	33.1	16.7	3.3	7.5	3.9	20.0	9.2	9.3
SOMEWHAT	44.4	31.7	47.5	34.2	44.2	66.7	13.6	47.5	82.5	16.7
NOT AT ALL	42.6	50.8	19.5	49.2	52.5	25.8	82.5	32.5	8.3	74.1
Any pain in the body that interfered in the normal work										
SEVERELY	47.2	31.7	13.6	13.3	6.7	26.7	17.5	23.3	3.3	20.4
SOMEWHAT	33.3	47.5	83.9	55.0	23.3	52.5	53.4	63.3	92.5	38.9
NOT AT ALL	19.4	20.8	2.5	31.7	70.0	20.8	29.1	13.3	4.2	40.7
Total	108	120	118	120	120	120	103	120	120	108

Table 8.1b: Percentage distribution of respondents by ADL Limitations in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State run
State	Guj	TN	Mah	J & K	Pun	Raj	Ker
Whether Kidney disease bothers ADL							
Ability to do normal work							
SEVERELY	13.8	50.0	45.9	51.9	22.5	46.5	38.3
SOMEWHAT	24.8	43.3	42.3	42.6	32.5	42.4	45.8
NOT AT ALL	61.5	6.7	11.7	5.6	45.0	11.1	15.8
Ability to travel							
SEVERELY	14.7	45.8	41.4	34.3	19.2	29.3	32.5
SOMEWHAT	27.5	46.7	43.2	56.5	25.8	57.6	48.3
NOT AT ALL	57.8	7.5	15.3	9.3	55.0	13.1	19.2
Being dependent on others							
SEVERELY	20.2	42.5	29.7	44.4	12.5	33.3	25.0
SOMEWHAT	28.4	50.0	43.2	42.6	49.2	46.5	52.5
NOT AT ALL	51.4	7.5	27.0	13.0	38.3	20.2	22.5
Stress or worries caused by kidney disease							
SEVERELY	22.0	52.5	50.5	71.3	7.5	41.4	44.2
SOMEWHAT	35.8	46.7	29.7	16.7	54.2	56.6	40.0
NOT AT ALL	42.2	0.8	19.8	12.0	38.3	2.0	15.8
Physical appearance							
SEVERELY	19.3	46.7	29.7	62.0	10.8	10.1	25.8
SOMEWHAT	25.7	50.0	48.6	31.5	46.7	78.8	56.7
NOT AT ALL	55.0	3.3	21.6	6.5	42.5	11.1	17.5
Ability to use washroom on your own							
SEVERELY	11.9	24.2	24.3	18.5	23.3	69.7	5.8
SOMEWHAT	17.4	57.5	32.4	22.2	34.2	25.3	19.2
NOT AT ALL	70.6	18.3	43.2	59.3	42.5	5.1	75.0
Any pain in the body that interfered in the normal work							
SEVERELY	13.8	50.8	26.1	19.4	9.2	19.2	17.5
SOMEWHAT	37.6	45.0	41.4	44.4	43.3	73.7	69.2
NOT AT ALL	49	4	32	36	48	7	13
Total	109	120	111	108	120	99	120

Table 8.2a: Percentage distribution of respondents by the extent to which the patients contribute to the family and society in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Extent health improved after dialysis										
DETEREORATING	1.9	10.0	0.0	5.8	2.5	3.3	1.9	0.8	2.5	0.0
NOT AT ALL	12.0	8.3	14.4	15.0	4.2	13.3	24.3	0.8	0.0	10.2
TO SOME EXTENT	70.4	62.5	78.0	55.8	23.3	71.7	49.5	80.8	97.5	50.9
TO A GREAT EXTENT	15.7	19.2	7.6	23.3	70.0	11.7	24.3	17.5	0.0	38.9
Able to Contribute to family										
YES	29.6	66.7	75.4	50.0	82.5	65.8	83.5	76.7	8.3	63.9
NO	70.4	33.3	24.6	50.0	17.5	34.2	16.5	23.3	91.7	36.1
Able to be part of family events										
NO SUCH EVENTS	68.5	50.8	85.6	42.5	60.8	49.2	14.6	26.7	93.3	47.2
MARRIAGE OF SON/DAUGHTER	10.2	24.2	10.2	29.2	5.0	15.0	5.8	48.3	4.2	15.7
IMPORTANT FAMILY EVENTS	30.6	36.7	5.1	34.2	7.5	29.2	39.8	64.2	2.5	45.4
CHILDREN'S ACHIEVEMENTS IN EDUCATION	6.5	9.2	1.7	9.2	0.0	13.3	9.7	8.3	0.0	10.2
CELEBRATIONS IN THE FAMILY (BIRTHS/FESTIVALS etc)	18.5	35.0	6.8	15.0	2.5	25.8	27.2	31.7	0.0	13.9
SOCIAL EVENTS WHICH YOU WANT TO BE PART OF	7.4	8.3	0.8	15.0	1.7	9.2	12.6	34.2	0.0	9.3
OTHERS	0.0	0.0	0.0	0.0	0.0	1.7	13.6	0.0	0.0	0.0
Total	108	120	118	120	120	120	103	120	120	108

Table 8.2b: Percentage distribution of respondents by the extent to which the patients contribute to the family and society in the group of States classified by mode of Implementation of PMNDP

Social Aspects	In-House					Hybrid	State run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Extent health improved after dialysis							
DETEREORATING	0.0	0.0	1.8	2.8	5.0	1.0	0.0
NOT AT ALL	0.9	38.3	1.8	0.0	25.8	6.1	5.0
TO SOME EXTENT	92.7	61.7	69.4	80.6	64.2	79.8	87.5
TO A GREAT EXTENT	6.4	0.0	27.0	16.7	5.0	13.1	7.5
Able to Contribute to family							
YES	90.8	30.0	55.9	31.5	82.5	83.8	20.8
NO	9.2	70.0	44.1	68.5	17.5	16.2	79.2
Able to be part of family events							
NO SUCH EVENTS	65.1	63.3	40.5	64.8	33.3	21.2	54.2
MARRIAGE OF SON/DAUGHTER	14.7	4.2	24.3	25.0	17.5	39.4	2.5
IMPORTANT FAMILY EVENTS	20.2	30.8	39.6	10.2	31.7	83.8	46.7
CHILDREN'S ACHIEVEMENTS IN EDUCATION	8.3	3.3	14.4	3.7	4.2	26.3	0.0
CELEBRATIONS IN THE FAMILY (BIRTHS/FESTIVALS etc)	17.4	10.8	27.0	5.6	5.0	37.4	26.7
SOCIAL EVENTS WHICH YOU WANT TO BE PART OF	11.9	0.0	30.6	5.6	9.2	17.2	12.5
OTHERS	2.8	0.0	0.0	0.9	0.0	0.0	0.0
Total	109	120	111	108	120	99	120

Table 8.3a: Percentage distribution of respondents by supportive role of the dialysis centre in creating awareness on dialysis process in the group of States classified by mode of Implementation of PMNDP

	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
How often importance of dialysis discussed										
NEVER	4.6	2.5	0.0	9.2	0.0	8.3	1.9	2.5	0.8	3.7
SOMETIMES	56.5	30.8	33.1	38.3	9.2	43.3	20.4	40.8	57.5	18.5
ALWAYS	38.9	66.7	66.9	52.5	90.8	48.3	77.7	56.7	41.7	77.8
Total										
Advise received from the Centre										
TAKING MEDICINES REGULARLY	91.7	99.2	100.0	83.3	99.2	98.3	95.1	89.2	99.2	93.5
FLUID RESTRICTION	88.0	68.3	100.0	51.7	87.5	84.2	100.0	82.5	77.5	50.0
DIETARY RESTRICTIONS	84.3	81.7	100.0	59.2	97.5	95.0	99.0	90.8	90.8	87.0
IMPORTANCE OF MAINTAINING WEIGHT	60.2	89.2	100.0	67.5	85.0	79.2	96.1	88.3	2.5	89.8
REGULAR WEIGHT MONITORING BEFORE AND AFTER DIALYSIS	62.0	94.2	100.0	80.0	94.2	76.7	98.1	88.3	5.0	91.7
TREATMENT PROTOCOLS LIKE FOLLOW UP	67.6	89.2	100.0	41.7	90.8	70.8	87.4	79.2	0.0	84.3
MAINTAINING REGULAR SODIUM AND POTASSIUM LEVELS	50.0	78.3	100.0	48.3	96.7	55.0	47.6	59.2	0.0	62.0
OTHER	0.0	0.0	0.0	0.0	0.0	3.3	1.0	0.8	0.0	0.0
Total	108	120	118	120	120	120	103	120	120	108

Table 8.3b: Percentage distribution of respondents by supportive role of the dialysis centre in creating awareness on dialysis process in the group of States classified by mode of Implementation of PMNDP

	In-House					Hybrid	State run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
How often importance of dialysis discussed							
NEVER	0.0	0.0	6.3	1.9	11.7	1.0	13.3
SOMETIMES	12.8	42.5	53.2	38.9	28.3	66.7	68.3
ALWAYS	87.2	57.5	40.5	59.3	60.0	32.3	18.3
Total							
Advise received from the Centre							
TAKING MEDICINES REGULARLY	100.0	100.0	81.1	99.1	82.5	100.0	100.0
FLUID RESTRICTION	100.0	100.0	40.5	95.4	45.0	73.7	100.0
DIETARY RESTRICTIONS	100.0	98.3	61.3	96.3	47.5	87.9	98.3
IMPORTANCE OF MAINTAINING WEIGHT	97.2	93.3	36.0	96.3	35.8	67.7	70.8
REGULAR WEIGHT MONITORING BEFORE AND AFTER DIALYSIS	100.0	85.8	61.3	97.2	46.7	41.4	97.5
TREATMENT PROTOCOLS LIKE FOLLOW UP	100.0	78.3	54.1	85.2	48.3	8.1	22.5
MAINTAINING REGULAR SODIUM AND POTASSIUM LEVELS	100.0	41.7	45.9	75.0	32.5	19.2	97.5
OTHER	0.0	0.0	0.0	0.0	4.2	0.0	0.0
Total	109	120	111	108	120	99	120

Table 8.4a: Percentage distribution of respondents by Satisfaction on Services at the Dialysis Centre in the group of States classified by mode of Implementation of PMNDP

States	PPP Mode									
	Kar	Del	Ass	UP	Bih	Har	MP	HP	AP	Tel
Rate Care during dialysis										
POOR	0.9	5.0	0.0	0.8	0.0	0.8	0.0	0.0	0.0	0.9
AVERAGE	17.6	9.2	3.4	25.0	0.8	9.2	3.9	23.3	45.8	11.1
GOOD	81.5	85.8	96.6	74.2	99.2	90.0	96.1	76.7	54.2	88.0
Satisfaction on behaviour of staff										
NOT AT ALL	0.0	1.7	0.0	0.8	0.0	0.8	0.0	0.0	0.0	2.8
TO SOME EXTENT	13.0	10.8	0.0	3.3	0.0	10.8	2.9	14.2	34.2	9.3
SATISFIED	87.0	87.5	100.0	95.8	100.0	88.3	97.1	85.8	65.8	88.0
Satisfaction on time spent by staff										
NOT AT ALL	0.0	2.5	0.0	0.8	0.0	0.0	0.0	0.0	0.0	1.9
TO SOME EXTENT	14.8	10.8	2.5	5.8	0.8	10.8	1.9	17.5	27.5	11.1
SATISFIED	85.2	86.7	97.5	93.3	99.2	89.2	98.1	82.5	72.5	87.0
Availability of Doctor when needed										
RARELY	20.4	17.5	0.0	18.3	4.2	9.2	4.9	6.7	5.0	24.1
OFTEN	40.7	26.7	38.1	31.7	9.2	37.5	27.2	29.2	36.7	37.0
ALWAYS	29.6	53.3	56.8	50.0	86.7	50.8	17.5	61.7	57.5	34.3
DIDN'T NEED TO SEE A DOCTOR	9.3	2.5	5.1	0.0	0.0	2.5	50.5	2.5	0.8	4.6
Satisfaction on Doctor consultation										
NOT AT ALL	15.7	10.8	0.0	25.0	1.7	1.7	14.6	3.3	0.0	21.3
TO SOME EXTENT	10.2	22.5	28.8	17.5	6.7	20.8	11.7	31.7	48.3	10.2
SATISFIED	74.1	66.7	71.2	57.5	91.7	77.5	73.8	65.0	51.7	68.5
Satisfaction on Doctor's visit during dialysis										
NOT AT ALL	14.8	9.2	0.0	15.0	1.7	5.0	19.4	5.8	0.0	22.2
TO SOME EXTENT	14.8	17.5	30.5	25.8	5.0	17.5	9.7	20.8	45.8	9.3
SATISFIED	70.4	73.3	69.5	59.2	93.3	77.5	70.9	73.3	54.2	68.5
Satisfaction on Privacy										
NOT AT ALL	3.7	0.8	0.0	9.2	2.5	1.7	7.8	0.8	0.0	0.0
TO SOME EXTENT	21.3	7.5	0.0	21.7	4.2	30.0	17.5	20.8	20.8	14.8
SATISFIED	75.0	91.7	100.0	69.2	93.3	68.3	74.8	78.3	79.2	85.2
Satisfaction on cleanliness and hygiene										
NOT AT ALL	3.7	2.5	0.0	0.8	0.0	0.8	0.0	3.3	0.8	0.9
TO SOME EXTENT	11.1	10.8	2.5	15.8	0.0	27.5	4.9	29.2	14.2	13.0
SATISFIED	85.2	86.7	97.5	83.3	100.0	71.7	95.1	67.5	85.0	86.1
Satisfaction on facilities available										
NOT AT ALL	27.8	97.5	1.7	34.2	0.8	7.5	22.3	10.8	33.3	58.3
TO SOME EXTENT	34.3	2.5	0.0	8.3	0.0	30.0	11.7	41.7	9.2	6.5
SATISFIED	38.0	0.0	98.3	57.5	99.2	62.5	66.0	47.5	57.5	35.2
Rate overall treatment at Centre										
POOR	3.7	2.5	0.0	0.0	0.0	0.8	1.0	0.8	0.0	0.9
AVERAGE	9.3	13.3	1.7	25.8	0.0	12.5	10.7	18.3	18.3	10.2
GOOD	87.0	84.2	98.3	74.2	100.0	86.7	88.3	80.8	81.7	88.9
Total	108	120	118	120	120	120	103	120	120	108

Table 8.4b: Percentage distribution of respondents by Satisfaction on Services at the Dialysis Centre in the group of States classified by mode of Implementation of PMNDP

Satisfaction on Services at the Dialysis Centre	In-House					Hybrid	State run
	Guj	TN	Mah	J & K	Pun	Raj	Ker
Rate Care during dialysis							
POOR	0.0	0.0	2.7	0.0	0.0	0.0	0.0
AVERAGE	0.9	0.0	19.8	4.6	5.8	25.3	1.7
GOOD	99.1	100.0	77.5	95.4	94.2	74.7	98.3
Satisfaction on behaviour of staff							
NOT AT ALL	0.0	0.0	5.4	0.0	0.8	0.0	0.0
TO SOME EXTENT	0.9	0.0	18.0	0.9	2.5	17.2	4.2
SATISFIED	99.1	100.0	76.6	99.1	96.7	82.8	95.8
Satisfaction on time spent by staff							
NOT AT ALL	0.0	0.0	1.8	0.0	14.2	0.0	0.0
TO SOME EXTENT	1.8	0.0	19.8	0.9	6.7	14.1	22.5
SATISFIED	98.2	100.0	78.4	99.1	79.2	85.9	77.5
Availability of Doctor when needed							
RARELY	19.3	15.0	13.5	1.9	21.7	0.0	65.8
OFTEN	22.0	28.3	26.1	23.1	5.0	8.1	11.7
ALWAYS	5.5	25.0	40.5	75.0	70.0	64.6	20.8
DIDN'T NEED TO SEE A DOCTOR	53.2	31.7	19.8	0.0	3.3	27.3	1.7
Satisfaction on Doctor consultation							
NOT AT ALL	19.3	5.0	11.7	0.0	20.8	1.0	48.3
TO SOME EXTENT	44.0	26.7	27.0	19.4	5.8	18.2	31.7
SATISFIED	36.7	68.3	61.3	80.6	73.3	80.8	20.0
Satisfaction on Doctor's visit during dialysis							
NOT AT ALL	17.4	8.3	11.7	0.0	15.0	0.0	7.5
TO SOME EXTENT	45.9	30.0	31.5	22.2	4.2	18.2	66.7
SATISFIED	36.7	61.7	56.8	77.8	80.8	81.8	25.8
Satisfaction on Privacy							
NOT AT ALL	0.9	0.0	3.6	0.0	5.8	0.0	0.8
TO SOME EXTENT	16.5	4.2	18.0	1.9	1.7	32.3	37.5
SATISFIED	82.6	95.8	78.4	98.1	92.5	67.7	61.7
Satisfaction on cleanliness and hygiene							
NOT AT ALL	0.0	0.8	15.3	1.9	0.0	0.0	0.8
TO SOME EXTENT	0.9	1.7	20.7	4.6	2.5	7.1	31.7
SATISFIED	99.1	97.5	64.0	93.5	97.5	92.9	67.5
Satisfaction on facilities available							
NOT AT ALL	16.5	100.0	57.7	7.4	7.5	3.0	11.7
TO SOME EXTENT	2.8	0.0	13.5	6.5	8.3	46.5	38.3
SATISFIED	80.7	0.0	28.8	86.1	84.2	50.5	50.0
Rate overall treatment at Centre							
POOR	0.0	0.0	1.8	0.9	4.2	0.0	0.0
AVERAGE	4.6	0.0	42.3	1.9	9.2	3.0	1.7
GOOD	95.4	100.0	55.9	97.2	86.7	97.0	98.3
Total	109	120	111	108	120	99	120