

National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)

1. Introduction

Non-communicable diseases (NCDs) are the leading cause of adult mortality and morbidity worldwide. NCDs are rapidly increasing globally and reached epidemic proportions in many countries, largely due to industrialization, socio-economic development, rapid urbanization, demographic and lifestyle changes. These diseases are posing a major public health challenge that undermines social and economic development, and place a tremendous demand on health systems and social welfare throughout the world especially in low/ and middle/income countries. NCDs are surpassing communicable diseases as the most common causes of morbidity and premature mortality worldwide.

The major NCDs are cardiovascular diseases including heart diseases and stroke, diabetes, cancer and chronic respiratory diseases including chronic obstructive pulmonary disease and asthma, mental health, and injuries. Tobacco, alcohol, unhealthy diet, physical inactivity, high salt intake, use of trans-fats, high blood pressure, and obesity are the major risk factors common to many non-communicable diseases. Urgent action is required at the global, regional and national level to address the increasing challenge and to prevent increasing inequalities between countries and in populations.

Keeping in view that there are common preventable risk factors for Cancer, Diabetes, CVD & Stroke, Government of India initiated a National Programme for Prevention and Control of Cancers, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) during 2010-11 after integrating the National Cancer Control Programme (NCCP) with National Programme for Prevention and Control of Diabetes, Cardiovascular Diseases and Stroke (NPDCS). The focus of NPCDCS is on promotion of healthy life styles, early diagnosis and management of diabetes, hypertension, cardiovascular diseases & common cancers e.g. cervix cancer, breast cancer & oral cancer

2. 11th Five Year Plan inputs:

2.1 Strategy

The programme was initiated in the second half of 2010 with focus on strengthening of infrastructure, human resource development, health promotion, early diagnosis, treatment and referral. It was implemented in 100 backward and inaccessible districts across 21 States during 2010-12.

2.2 Activities/Interventions adopted

2.2.1 Prevention through behavior change:

The major risk factors to cancer, hypertension, obesity, diabetes and cardiovascular diseases are unhealthy diet, physical inactivity, stress, consumption of tobacco & alcohol. Attempts were made to prevent these risk factors by creating general awareness about the Non Communicable Diseases (NCD) and promotion of healthy life style habits among the community through various categories of mass media (electronic and print), community education and interpersonal communication.

2.2.2 Early diagnosis

Strategy for early diagnosis comprised opportunistic screening of persons above the age of 30 years for diabetes and hypertension, at the point of primary contact with any health care facility, be it the village, sub-centre, CHC and District hospital. Financial and technical support was provided for strengthening laboratory services at CHC and District Hospitals for investigations like blood sugar, lipid profile, ultrasound, X-ray and ECG. Outsourcing was permitted in case no facility for particular investigation/test in house exists.

For screening the population of 30 years of age and above for early detection of suspected cases of diabetes and hypertension at the sub-centre in 100 programme districts of 21 states, commodity support for glucometer, glucostrips and lancets was provided to the states.

2.2.3 Treatment

2.2.3.1 Community health center

‘NCD clinic’ was established at CHC for Cancer, Diabetes, Hypertension, Cardiovascular diseases and Strokes, where comprehensive examination of patients referred by lower health facility /Health Worker as well as of those reporting directly was conducted for ruling out complications or advanced stages of common NCDs. Screening, diagnosis and management (including diet counseling, Lifestyle management) were the key functions of the clinic.

For providing effective care at CHC level under the programme, financial assistance was provided to each CHC for purchase of furniture, equipment, computer etc and recurring expenditure includes support for laboratory investigations (blood sugar measurement, lipid

profile, ultrasound, X-ray and ECG etc.) contractual manpower (1 doctor, 2 nurses, 1 counselor and 1 data entry operator) home based care and miscellaneous expenditures.

For operationalization of NCD clinic at CHC level, hiring of one doctor, two nurses, one counselor and one data entry operator on contractual basis was envisaged.

In the financial assistance, 80% was central share and 20% state share.

2.2.3.2 District Hospital

The selected districts were strengthened to provide comprehensive preventive, supportive and curative services for cancer, diabetes, hypertension and cardio vascular diseases. The district hospital was provided the financial support for non-recurring expenditure and recurring expenditure for strengthening of cardiac care unit (CCU), NCD clinic, human resource on contract (1 specialist, 2 nurses, 1 physiotherapist, 2 counselor, 1 data entry operator and 1 care coordinator), drugs and consumables, transport of referred/ serious patients, IEC and miscellaneous expenditure was provided under diabetes, CVDs and stroke (DCS) component of the programme.

For care of cancer patient, each programme district hospital was provided the financial support for day care chemotherapy facility including chemotherapy drugs, hiring of manpower (1 medical oncologist, 1 cyto pathologist, 1 cyto-pathologist technician and 2 nurses), consumables, investigations (mammography) etc.

The financial support included the provision of up to Rs. 1 lakh/patient/year (for about 100 patients) for chemotherapy and hiring of human resource such as 1 medical oncologist, 1 cyto-pathologist, 1 cytopathology technician and 2 nurses.

In the financial assistance, 80% was central share and 20% state share.

2.2.3.3 Tertiary Cancer Centres (TCCs)

Under cancer component of the programme, there was provision of one time financial assistance of maximum Rs. 6 crore with the central and the state share of 80:20 for strengthening of comprehensive cancer care at medical colleges/institutes/district hospitals as TCCs. The comprehensive cancer care included provision of radiotherapy, chemotherapy, surgical oncology and diagnostic facilities. 7 Tertiary Cancer Centers (TCCs) have been strengthened for providing comprehensive cancer care in the country.

2.2.4 Capacity building of human resource

For capacity building (training) of Health personnel, the National Institute of Health and Family Welfare (NIHFW) was identified as a nodal agency under the programme. About 800 doctors were trained for health promotion, prevention, early detection and management of diabetes, hypertension, cardiovascular diseases and stroke. However, the specialized training in cancer care and management of CCU is to be taken up during 12th plan.

2.2.5 Supervision, monitoring and evaluation

Regular monitoring and review of the scheme was conducted at the District, State and Central level through monitoring formats and periodic visits and review meetings. NCD cell at different levels were envisaged to supervise and monitor the programme. The financial assistance for establishing State and District NCD cell (for infrastructure and hiring of manpower on contract) was provided under the program.

2.3 Physical Achievements

The programme was initiated in October 2010 towards the end of the 11th Plan in 100 backward and remote districts of 21 states.

- As on 21st January 2013, 1.41 crore target population have been screened including 9.85 lakh population of urban slums and about 1 lakh school children using glucometer and glucostrips and lancets, out of which 7.41% was found suspected for diabetes and 6.82% for hypertension.
- Health promotion activities were undertaken to generate awareness regarding lifestyle diseases.
- To provide early diagnosis and management, NCD clinics were started in 41 district hospitals and 16 CHCs,
- Facilities for Cardiac Care were established/ strengthened in 30 district hospitals by providing financial assistance for establishing/strengthening the cardiac care unit. This financial assistance was for renovation and to purchase equipments such as ventilators, monitors, defibrillator, CCUs bed, portable ECG machine, pulse oxymeter etc.

- Chemotherapy facility (day care center) in 4 districts (Mewat in Haryana, Leh in Jammu & Kashmir, East Sikkim and Pathanathitta in Kerala) was established. The facilities included chemotherapy beds, manpower and chemotherapy drugs etc.
- 7 Tertiary Cancer Centers (TCCs) have been strengthened for providing comprehensive cancer care in the country.
- For over all monitoring of the programme, NCD cells were established in 20 states and 42 districts.

2.4 Modalities of implementation

The programme division at the national level in the Ministry of Health & Family Welfare was the focal point to roll out NPCDCS in the country. The role of centre was to plan, coordinate, and monitor all the activities, to develop operational guidelines, Standard Operating Procedures (SOP), training modules, monitoring and reporting systems and tools.

State Government was responsible for micro-planning for implementation of the programme, adopting and translation of training material for peripheral health care providers, periodic collection and compilation of data and for screening of population of age 30 years and above for diabetes and hypertension. The achievement of physical and financial targets as planned under the programme was the responsibility of the concern State.

2.5 Release of funds and monitoring of expenditure

The funds were released to States under two separate components of the NPCDCS i.e. (i) Cancer and (ii) Diabetes, Cardiovascular Diseases & Stroke (DCS) through the State Health Society to carry out the activities at different levels. Details of funds released are as under:

Programme division at GOI was responsible to monitor the release of funds to States under various components of the programme. Similarly, State was responsible for release of funds to the districts and expenditure incurred in the District/State. State NCD Cell had to submit statement of expenditure to the National NCD Cell at Centre.

2.6 System of Monitoring & Evaluation:

Monitoring of the programme was carried out by NCD Cells at Districts, States and at National level. Review meetings and field visits of officials were held to assess physical and financial progress.

2.7 11th Five year Plan- learning & feedback:

Initial phase of the programme has helped in identifying the bottle-necks in the implementation and requirements for successful implementation. The main difficulties faced for the implementation of the programme are as under:

1. Dedicated personnel not appointed as State and District NCD programme officers/nodal persons
2. Delay in procurement of equipments for cardiac care units at district hospitals
3. Non availability of trained manpower for cardiac and cancer care at district level
4. Delay in hiring manpower on contract at various level (State, District and CHC)
5. Delay in contribution of 20% State share funding
6. Poor utilization of funds by the State and District
7. Incomplete proposals received for support to TCCs

Efforts will be made to overcome these difficulties in the 12th Five Year Plan.

3 12th Five year Plan:

3.1 Status of Programme

Currently, (2012-13) the programme is being implemented in 100 districts and is proposed to be expanded to in all the districts across the country with focus on strengthening of infrastructure, human resource development, health promotion, early diagnosis, treatment and referral for prevention and control of cancer, diabetes, cardiovascular diseases and stroke.

3.1.2 Disease burden:

In 2008, out of the 57 million global deaths, 36 million deaths, or 63%, were due to NCDs, principally cardiovascular diseases, diabetes, cancers and chronic respiratory diseases. Nearly 80% of NCD deaths occur in low-and middle-income countries. It is projected that globally NCDs will account for nearly 44 million deaths in 2020. The leading causes of NCD deaths in 2008 were: cardiovascular diseases (17 million deaths, or 48%of NCD deaths); cancers (7.6

million, or 21% of NCD deaths); respiratory diseases, including asthma and chronic obstructive pulmonary disease (COPD), (4.2 million) and diabetes (1.3 million deaths).NCDs kill at a younger age in low- and middle-income countries, where 29% of NCD deaths occur among people under the age of 60, compared to 13% in high-income countries. (*Global status report on noncommunicable diseases 2010*)

In India, the estimated deaths due to NCDs in 2008 were 5.3 million (*World Health Organization - NCD Country Profiles, 2011*). The overall prevalence of diabetes, hypertension, Ischemic Heart Diseases (IHD) and stroke in India is 62.47, 159.46, 37.00 and 1.54 respectively per 1000 population. (*Indian council for Medical Research, 2006*).

Based on National Cancer Registry Programme (NCRP) of Indian Council of Medical Research (ICMR), it is estimated that there are about 28 lakh cases of different type of Cancer in the country with new occurrence of about 11 lakh cases and about 5 lakh deaths annually. The common cancers are breast, cervical and oral cancer.

Major risk factors to NCDs

Most NCDs are strongly associated and causally linked with following four major behaviour risk factors:

- (i). Tobacco use
- (ii). Physical inactivity
- (iii). Unhealthy diet including high intake of salt (sodium chloride)
- (iv). Harmful use of alcohol

The other risk factors include stress, lack of fiber (food and vegetable), trans-fatty acids etc.

If the above behavioural risk factors are not being managed /modified then they may lead to following biological risk factors:

- (i). Over weight/obesity
- (ii). High blood pressure
- (iii). Raised blood sugar
- (iv). Raised total cholesterol/lipids

The other non-modifiable risk factors such as age, sex and hereditary are also associated with the occurrence of NCDs.

The major risk factor for the oral, oro-pharyngeal and lung cancer is tobacco use.

3.1.3 Economic burden of NCDs

The cost implications of non-communicable diseases to society are multifold: direct costs to people with illness, their families and to the health care sectors and indirect costs to society and the government, due to reduced productivity; and intangible costs, that is adverse affects on quality of life. Heart disease, stroke and diabetes cause loss of billions of dollars to national income each year in the world's most populous nations.

3.2 Objectives

Following are the objectives of the NPCDCS in 12th Five Year Plan

- I. Health promotion through behavior change with involvement of community, civil society, community based organizations, media etc.
- II. Opportunistic screening at all levels in the health care delivery system from sub-centre and above for early detection of diabetes, hypertension and common cancers. Outreach camps are also envisaged.
- III. To prevent and control chronic Non-Communicable diseases, especially Cancer, Diabetes, CVDs and Stroke.
- IV. To build capacity at various levels of health care for prevention, early diagnosis, treatment, IEC/BCC, operational research and rehabilitation.
- V. To support for diagnosis and cost effective treatment at primary, secondary and tertiary levels of health care.
- VI. To support for development of database of NCDs through Surveillance System and to monitor NCD morbidity and mortality and risk factors.

The above objectives will enable the country in achieving the WHO voluntary targets related to NCDs.

3.3 Strategy

The strategies for prevention, control and treatment of cancer, diabetes, CVDs and stroke would have following components:

- Health promotion, awareness generation and promotion of healthy lifestyle
- Screening and early detection
- Timely, affordable and accurate diagnosis
- Access to affordable treatment,
- Rehabilitation

Under the 12th FYP, while the coverage is proposed to be pan- India, the focus of the programme is on health promotion, prevention, detection, treatment and rehabilitative services at decentralized level up to district hospital under the overall umbrella of National Health Mission for primary and secondary level health care services. Tertiary care services are being dealt separately.

The programme division at the national level will develop broad guidelines and strategy for implementation of different components of the programme. The States may adopt and modify these guidelines as per their need and circumstances for implementation of the programme. Involvement of community, civil society and private sector partnership would be vital, and suitable guidelines would be made for the same.

The packages of services to be provided at different levels of health facilities under the NPCDCS are at **Annexure I**.

3.3.1 Health Promotion

Given that the major determinants to hypertension, obesity, high blood glucose and high blood lipid levels are unhealthy diet, physical inactivity, stress and consumption of tobacco and alcohol, awareness will be generated in the community to promote healthy life style habits. For such awareness generation and community education, various strategies will be devised /formulated for behavior change and communication by inter personal communication (IPC), involvement of various categories of mass media, civil society, community based organization, panchayats/local bodies, other government departments and private sector.

The focus of health promotion activities will be on:

- Increased intake of healthy foods
- Salt reduction
- Increased physical activity/regular exercise
- Avoidance of tobacco and alcohol
- Reduction of obesity
- Stress management
- Awareness about warning signs of cancer etc.
- Regular health check-up

3.3.2 Screening, diagnosis and treatment

Screening and early detection of non-communicable diseases especially diabetes, high blood pressure and common cancers would be an important component. The screening of target population (age 30 years and above, and pregnant women) will be conducted either through opportunistic and/or camp approach at different levels of health facilities and also in urban slums of large cities. The screening of the urban slum population would be carried out by the local government/municipalities in cities with population of more than 1 million. The screening of school children will be carried out during the routine school health check-up activity under the school health program. The suspected cases of diabetes and high blood pressure will be referred to higher health facilities for further diagnosis and treatment.

Opportunistic screening for common cancers (breast, cervical and oral) among the population 30 years at different level of health facilities will be carried out. Screening for prostate cancer at CHC and District Hospital levels in 60 years+ male can also be considered. The ANMs will be trained for conducting screening so that the same can be also conducted at sub centre level. Each district will be linked to nearby tertiary cancer care (TCC) facilities to provide referral and outreach services. The suspected cases will be referred to District Hospital and tertiary cancer care (TCC) facilities.

For screening of diabetes, support for Glucometers, Glucostrips and lancets would be provided to the state under NRHM.

The common infrastructure/manpower envisaged can be utilized for early detection of cases, diagnosis, treatment, training and monitoring of different program such as National Program for Prevention Control of Cancer, Diabetes, CVDs and Stroke (NPCDCS),

National Program for Health Care of Elderly (NPHCE), National Tobacco Control Program (NTCP), National Mental Health Program (NMHP) etc.

3.3.3 Establishment/Strengthening of Health infrastructure

Community health centers and district hospitals would be supported for prevention, early detection and management of Cancer, Diabetes, Cardiovascular Disease and Stroke. Support would be provided for establishing NCD clinics and strengthening laboratory at Community health centers and district hospitals.

In order to provide cardiac care and cancer care at district level, the district hospitals would be provided financial assistance for establishing at least 6 bedded cardiac care unit. This includes provision for renovation and purchase of equipments such as ventilators, monitors, defibrillator, CCUs bed, portable ECG machine and pulse oxymeter etc. for cardiac care and chemotherapy beds for cancer chemotherapy. Support for contractual staff at these centers would also be provided under the programme.

The hired manpower on contract basis at district level will be utilized for NCD Clinic and CCU as well as for Chemotherapy unit. The manpower proposed to be provided at CHC level on contract will be utilized to run the NCD Clinic.

The details of establishment/strengthening of health infrastructure are at **Annexure II**.

3.3.4 Manpower development

Under NPCDCS, health professionals and health care providers at various levels of health care would be trained for health promotion, NCD prevention, early detection and management of Cancer, Diabetes, CVDs and Stroke. For imparting training both for the programme management and for specialized training for diagnosis, treatment of cancer, diabetes, CVDs and strokes, the nodal agency/agencies will be identified to develop the training material, organize training of health care providers at different levels and for monitoring the quality of the training.

3.3.5 Drugs and consumable:

Financial support would be provided to district and CHC/FRU/PHC for procurement essential drugs for treatment of Cancer, Diabetes, CVDs and Stroke.

3.3.6 Outreach services:

These services are proposed to be provided periodically in the programme districts in collaboration with tertiary care hospitals / institutes for early detection of common cancers, diabetes, CVDs and stroke.

3.3.7 Integration with AYUSH:

AYUSH doctors can play an important role in prevention and control of NCDs through primary health care network. They can be involved in health promotion activities through behavior change, counseling of patients and their relatives on healthy lifestyle (healthy diet, physical activity, salt reduction, avoidance of alcohol and tobacco) meditation, Yoga, opportunistic screening for early detection of non-communicable diseases and their risk factors, and treatment using Indigenous System of Medicines. The AYUSH practitioner can supplement the efforts to operationalizing these activities and thus need to be integrated with the National NCD prevention and control programs especially NPCDCS.

3.3.8 Public private partnership:

It is proposed to involve NGOs, civil society and private sector in health promotion, early diagnosis and treatment of common NCDs through suitable guidelines as per the need at Central, State, District levels and below.

3.3.9 Research and surveillance:

Support would be given to States and Institutes for surveillance & research on NCDs. Emphasis would be given on creating database, applied and operational research related to the programme. Survey for risk factors for NCDs would be conducted at frequency and by methods decided by experts.

Cancer registry programme of ICMR would be supported for having a data base for cancer cases in the country including rural areas. Registries for other NCDs can also be considered in due course of time.

3.3.10 Monitoring & evaluation

Monitoring and evaluation of the programme would be carried out at different levels through NCD cells, reports, regular visits to the field and periodic review meetings. National, State and District NCD Cell would be established/strengthened to monitor and supervise the programme by providing the support for contractual manpower, establishment

of physical infrastructure and for field visits, contingencies etc. Management Information System (MIS) would be developed for capturing and analysis of data.

3.4 Changes in strategy vis a vis in 11th Five year Plan

Following are the changes in the 12th plan strategy vis a vis in 11th Five year Plan

- Sub Centres and PHCs are proposed to be covered.
- The programme will cover all the districts in the country.
- Screenings of Diabetes and hypertension in urban slums in cities with population of more than 1 million will get priority.
- Screening for common cancers is also envisaged
- Outreach camps are envisaged
- Cardiac Care Units and Chemotherapy Centres at district hospitals would be established / strengthened at 25% districts (all India).
- ICMR Registry programmes are proposed for NCDs especially cancer.
- Periodic NCD risk factor survey
- Hub and spoke model is proposed for providing comprehensive care, where hub would be the tertiary care hospital/ Medical College and spokes would be the districts.

3.6 Implementation mechanism

This programme would be on a cost sharing basis of 75: 25 with Government of India (GOI) and State except States in North East and hilly areas, where the share would be 90: 10 between Centre and the States

3.7 Physical Targets- year wise breakup

Under the 12th Plan, it is proposed to cover all districts of the country, 100 in the year 2012-13, 200 districts in 2013-14, 150 districts in the 3rd and 4th year and 50 districts in the 5th year of 12th FYP.

3.8 Requirement of financial resources (Recurring and Non-Recurring)-year wise breakup

Total cost of the programme is estimated to be about Rs. 11,000 crore, out of which cost for the programme till district level is Rs. 8096 crore (share of Government of India will be Rs.6535 crore and that of State Governments will be Rs. 1561 crore) . The funds would be provided to the States as an envelope with identified activities at each health facility level with inter-usability of funds from one component to another, in order to impart operational flexibility in implementation of the programme according to their need.

3.9 Procurement requirement & method

For the screening of diabetes, glucometers, strips and lancets would be required. These will be procured by State Government.

For the Cardiac Care Unit (CCU), equipments such as beds, monitors, ventilators, defibrillators, Pulse Oximeter, ECG machine etc. are required. The requirement would vary since at some places this will be new setup while at other places the existing setup would be strengthened. The equipments are expected to be procured by state/ district through the government procedure. The models of equipments would depend on the availability and suitability.

The equipments required for cancer screening and cancer care would be procured locally for which funds would be provided.

Packages of services to be made at different levels under NPCDCS

Health Facility	Packages of services
Sub centre	<ol style="list-style-type: none"> 1. Health promotion for behavior change and counseling 2. 'Opportunistic' Screening using B.P measurement and blood glucose by glucostrip method 3. Identification of early warning signals of common cancer and referral 4. Referral of suspected cases to CHC/ nearby health facility
PHC	<ol style="list-style-type: none"> 1. Health promotion for behavior change and counseling 2. 'Opportunistic' Screening using B.P measurement and blood glucose by gluco strip method 3. Clinical diagnosis and treatment of simple cases of Hypertension and Diabetes 4. Identification of early warning signals of common cancer and referral 5. Referral of suspected cases to CHC
CHC/FRU	<ol style="list-style-type: none"> 1. Prevention and health promotion including counseling 2. Early diagnosis through clinical and laboratory investigations (Common lab investigations: Blood Sugar, lipid profile, ECG, ultrasound, X ray etc. ,if not available, may be outsourced) 3. Management of common CVD, diabetes and stroke cases 4. 'Opportunistic' Screening of common cancers (Oral, Breast, Cervix and prostate) 5. Referral of difficult cases to District Hospital/higher health care facility
District Hospital	<ol style="list-style-type: none"> 1. Early diagnosis of diabetes, CVDs and Cancer 2. Investigations :Blood Sugar, lipid profile, Kidney Function Tests (KFT), Liver Function Tests (LFT), ECG, Ultrasound, X ray, mammography etc., if not available, will be outsourced. 3. Medical management of cases (outpatient , inpatient and intensive Care) 4. 'Opportunistic' Screening of common cancers (Oral, Breast, Cervix and prostate) 5. Referral of difficult cases to higher health care facility 6. Health promotion for behavior change and counseling 7. Follow up chemotherapy in cancer cases 8. Rehabilitation and physiotherapy services
Medical College	<ol style="list-style-type: none"> 1. Mentoring of District Hospital 2. Early diagnosis and management of Diabetes, CVDs and other associated illnesses 3. Training of health personnel 4. Operational Research
Tertiary Cancer Centre	<ol style="list-style-type: none"> 1. Mentoring of District Hospital and outreach activities 2. Comprehensive cancer care including prevention, early detection, diagnosis, treatment, minimal access surgery, after care, palliative care and rehabilitation 3. Training of health personnel 4. Operational Research

Establishment/Strengthening of Health infrastructure

1. Community Health Centers (CHCs)

Under NPDCS, support will be provided to the CHC/FRU to establish a 'NCD clinic' (NCD here refers to Cancer, Diabetes, Hypertension, cardiovascular diseases and stroke) where comprehensive examination of patients referred by the Health Worker as well as reporting directly will be conducted for early diagnosis and treatment.

Priority would be given to First Referral Units (FRUs) (approx. 2315) to be strengthened for screening of common cancers, (oral, breast and cervix), NCD clinic, laboratory investigations and referral services. CHCs which were undertaken during 11th plan will also continue as referral unit.

Each CHC will be supported with contractual staff (1 Doctor, 1 Nurse, 1 Technician, 1 Counselor and 1 Data Entry Operator). Funds would be provided for transport of referral cases, consumables and essential drugs for NCDs etc.

2. District Hospital

District hospital would be strengthened /upgraded for management of Cancer, Diabetes, Cardiovascular Disease and Stroke (DCS). Support would be provided for non-recurring and recurring costs, where non-recurring grants would be for equipments, renovation and laboratory strengthening while recurring grants would be towards the remuneration of staff, drugs, training and IEC etc.

2.1 NCD clinic:

All districts will have regular NCD clinic for screening, management, and counseling and awareness generation etc. for non-communicable diseases. (NCD, here refers to Cancer, Diabetes, Hypertension, Cardiovascular diseases and Stroke) where comprehensive examination of patients referred by lower health facility /Health Worker as well as of those reporting directly will be conducted for ruling out complications or advanced stages of common NCDs.

2.2 Cardiac Care unit:

6 to 10 bedded Cardiac Care Unit (CCU)/ Intensive Care Unit (ICU) would be established / strengthened, in at least 25% district hospitals, wherever it is feasible, as per availability of space and need. This unit will be supported for manpower by human resource, recruited for NCD clinic, balance Human Resource would be provided by state) on contract basis apart from the contractual manpower for NCD clinic. Special training will be given to health professionals and nurses in handling the patients in CCU/ ICU. The districts will be supported with certain essential drug list including TPA (Tissue Plasminogen Activator) for stroke patients. All districts will have support for diagnostic facilities, in case the facility is not available in the district hospital, these investigations may be outsourced in Public Private Partnership (PPP) mode /pattern.

2.3 Support for cancer:

District hospitals would be supported for diagnostic facilities for common cancers, in case the facility is not available in the district hospital, these investigations may be outsourced in Public Private Partnership (PPP) pattern. Support would also be provided for chemotherapy drugs. All efforts should be made by State government to provide chemotherapy at district level. Till such time, patients should be referred to designated Tertiary Cancer Center (TCC) for treatment. Funds for chemotherapy for the district may be kept with Tertiary Cancer Center or at District Hospital. State shall ensure the availability of required human resource at district hospital for Cancer care (Gynecologist, Physician, General surgeon/ENT Surgeon and two nurses), which even otherwise supposed to be placed in district hospital and sub district hospital.

2.4 Laboratory strengthening:

Laboratory services at district hospital will be supported to provide necessary investigations for cancer, diabetes, hypertension and cardiovascular diseases. District hospital may outsource certain laboratory investigations that are not available at the facility. The District Hospital shall display the list of Laboratories in which these investigations would be outsourced.