PROGRAMMES FOR PREVENTION & CONTROL OF CHRONIC DISEASES:

Cancer pattern is varied in different parts of the country with increasing urbanization, sedentary habits & life style 1ouncil1n it is becoming a major life style problem. At this juncture the country is equipped with only 450 radiotherapy machines in 250 institutes, where as the requirement is 1160 (1 per million population). The experts felt that Cancer should be a notifiable disease for the whole country like the State of West Bengal.

It is essential that at all levels of the health facilities there is availability and accessibility of facilities for prevention, early detection, diagnosis, treatment and follow up of common cancers. The common cancers namely Oral, breast & cervix cancers can be easily prevented and detected early with simple measures and appropriated training of health professionals. Awareness generation on early warning signals, risk factors will help reduce at lest 1/3rd of the common cancers. Regular Oral Clinical/ Self/ Examination for prevention of Oral Cancers, regular Physical examination of the breasts for Breast Cancers and r will help in reducing the morbidity on common cancers.

At this juncture emphasis on availability of HPV vaccine at district level may not be required as simple advice on personal hygiene and early symptoms of Cervix Cancer and training of Health worker in VIA techniques will help in prevention & early detection of cervix cancers. Health promotion & life style changes will help in reducing NCDs including cancers. Palliative care is an important and essential part of cancer care therapy, at least 10% of the budget need to be earmarked for these services at level of cancer care services. For availability of health professionals at the districts it may be made mandatory that there be 1 year posting at district hospitals after completion of the courses in Oncology in Medical/Surgical/Radiotherapy/Medical Physicst after which the degrees would be provided.

For radiotherapy, Linear Accelerator requires higher maintenance compared to Cobalt machine and the down time of Cobalt machines is much lower than a Linear accelerator, so Cobalt machine is preferred. It is essential that at the tertiary level for Radiotherapy there should be at least the three: a Cobalt, a High Density Radiotherapy & a Treatment Planning System. In addition to these three any other radiotherapy equipment may be sought according to the requirements. Where feasible Linear Accelerator may be sought.

The District cancer services will be expanded to all 640 Districts. 100 Tertiary Cancer Centres will be strengthened in Govt. Medical Colleges & NGO Institutions Hospitals for comprehensive cancer care services across the country, 20 State Cancer Institutes will be established for all specialized cancer services, Training of specialists & Research during the 12th plan period. Support will be provided for 3 National Cancer Institutes including Chittaranjan National Cancer Institute (CNCl). The National Cancer Registry will be expanded
to all Tertiary Cancer centres and cancer institutions. **At all levels of health facilities provision is being kept for palliative care services including provision specific beds, training and development of required manpower for these services.**

a. **Cancer Services at District Hospitals:** At present the programme is being implemented in 100 districts across 21 States. The programme will be expanded to all the 640 districts in the country. Under this scheme, **District Cancer Centre will be established at the selected districts to provide** common diagnostic services, basic surgery, chemotherapy and **palliative care.** **District Surgeon, Physicians, Gynaecologist will be trained in management most of the common cancers including palliative care.** In addition to the existing manpower support is provided for contractual staff.

District hospital is being strengthened for prevention, early detection and management of common cancers especially oral cancer, breast cancer & cervix cancer. Nurse/Health worker will be trained in awareness generation on early warning signals of cancers, Oral self examination, Physical examination of breasts and VIA techniques for cervix cancer. Nurses will be given special training in Stoma care. For diagnosis of Cervix Cancer, white light source will be used as recommended by TMH. It is hand held device that works on regular 220V AC electricity with a 2council2 casing for halogen bulbs for shadow free illumination of the cervix.

**For palliative care there will be dedicated 4 beds at the district hospital. Doctors, Nurses & Health worker will be trained in basic palliative care. One of the doctors in the District hospital need to have a 2 weeks training in palliative care. Along with the local NGOs home care programme will be organized to empower the patient and their families. Necessary medicines including Oral morphine should be made available in the District by amendment of State regulations.** Support will be provided for Chemotherapy drugs required for cancer patients in addition to support for a Day care Chemotherapy facility for patients on chemotherapy regimens. Laboratory investigations which are not available at the districts can be outsourced. **A home base team consisting of nurse and counsellor (from DCS) would be trained in chronic, debilitating and progressive cancer patients.**

Support would be given for
- White Light Source (2council2 casing with halogen bulbs)
- Manpower: 1 Medical Oncologist, 1 Cytopathologist, 1 Cytopathology technician, 2 Nurses for Day care
- Day care Chemotherapy facilities (4 beds)
- Chemotherapy drugs patients @ Rs. 1 lakh per patient for 100 patients/year/district
- Outsourcing of Laboratory investigation including Mammography
- Miscellaneous activities including TA/DA, home based palliative care
b. **Tertiary Cancer Centres (TCC) Scheme:** Support will be given for 100 Govt. Medical Colleges/ NGO Institutions/erstwhile RCCs or institutes supported under Oncology wing scheme to be strengthened as Tertiary Cancer Centres across the country to provide comprehensive cancer care services. The institute/ hospital should have at least 100 general beds or should be 50 bedded exclusively cancer hospital with three years of experience in cancer treatment. There could be exemptions made for hilly/ difficult areas/ NE states and in States where there are no cancer treatment facilities. The TCC should be well within 300 km of identified districts under NPCDCS. The institute should have well equipped and functional departments of Medicine, Surgery, Gynecology & Obstetrics, ENT, Anesthesia, Pathology and Radiology. These departments can be part of the institute or part of hospital attached with a Government Medical College in near vicinity in the same city which has entered into a formal understanding with TCC.

These institutes will be supported with a capital grant for construction, equipments related to cancer care services including palliative care & pathology services. Support will also be given for Human Resource development, drugs, consumables etc as a recurring amount. **These institutes will have a Palliative Care unit with at least 4 in-patient beds and 2 beds in Day care for palliative care. There will be dedicated staffs in the palliative care unit: 2 Doctors, 6 nurses, a part time Pharmacist & a part time Physiotherapist. There will be OPD services for palliative care, 3 days per week and home care facilities. At least 10% of the total budget for TCC will be for Palliative care services including availability of opioids drugs e.g oral morphine. These centres will also ensure availability of opioids drugs including oral morphine in the district centres.**

The TCC will give an undertaking to ensure generation of cancer care health professionals by the 3rd year (2014-15) of the 12th five Year Plan. They shall initiate/increase courses in MD/MS/Mch/DM (Surgical oncology, Medical Oncology, Radiotherapist, Palliative Care, Diploma courses in Palliative Medicine, Pathologist, Medical Physicists etc.). They shall initiate/increase courses in Oncology Nursing and Diploma courses in Palliative Nursing. They should function as institutes to generate cyto-technicians, cyto-pathologists and other paramedicals for cancer care services.

These centres will be referral centres for the District Hospitals and provide comprehensive cancer care services. These institutes will also be training and research centres for cancer care. The TCCs will coordinate with other institutions, NGOs, medical colleges and the general health care delivery infrastructure in conduction of cancer related activities including peripheral outreach services in their respective geographical areas/ region.

c. **State Cancer Institutes (SCI):** Support will be given to 20 centres in the country to function as Centres of Excellence. These centres will be state-of-the-art treatment centre for different cancers including site specific specialties, minimal access surgery,
multidisciplinary groups and Oncology Nursing care for better delivery of treatment, better outcome results and optimum use of resources.

The institute/ hospital should have at least 150 general beds or should be 100 bedded exclusively cancer hospital with three years of experience in cancer treatment. The institute should have well equipped and functional departments of Medical Oncology, Radiation Oncology, Surgical Oncology and supportive departments of Medicine, Surgery, Gynecology & Obstetrics, ENT, Anesthesia, Pathology and Radiology. The erstwhile Government RCCs/TCCs may be upgraded to State Cancer Institutes.

Like the TCCs these institutes will also have a dedicated Palliative Unit with 10 beds, 4 day care beds, dedicated staff (3 doctors, 10 Nurses, 1 full time Pharmacist and Part time Physiotherapist) for palliative care services. The SCI will ensure availability of opioids drugs including oral morphine. These centres will also ensure availability of opioids drugs including oral morphine in the district centres. There will be OPD services for palliative care, 3 days per week and home care facilities. At least 10% of the total budget for SCI will be for Palliative care services.

These institutes will be supported with a capital grant for construction, equipments related to cancer care services including palliative care & pathology services. Support will also be given for Human Resource development, drugs, consumables etc as a recurring amount. The SCI will give an undertaking to ensure generation of cancer care health professionals by the 3rd year (2014-15) of the 12th five Year Plan. They shall initiate/increase courses in MD/MS/Mch/DM (Surgical oncology, Medical Oncology, Radiotherapist, Palliative Care, Diploma courses in Palliative Medicine, Pathologist, Medical Physicists etc.). They shall initiate/increase courses in Oncology Nursing and Diploma courses in Palliative Nursing. They should function as institutes to generate cyto-technicians, cyto-pathologists and other paramedicals for cancer care services.

These centres will be referral centres for the TCC/District Hospitals and provide specialized cancer care services. These institutes will also be training and research centres for cancer care. The SCIs will coordinate with other institutions, NGOs, medical colleges and the general health care delivery infrastructure in conduction of cancer related activities including peripheral outreach services in their respective geographical areas/ region.

d. **National Cancer Institute (NCI):** Support will be given for 3 National Cancer Institute in the country one in the North, one in the South & one in the east of India. These will be apex centres for providing training, research and in generating quality manpower related to cancer care services.
NCI will be state of art research & referral which will have comprehensive cancer care facilities. The institute will have department in Medical Oncology, Surgical Oncology, Radiation Oncology, Rehabilitation & Palliative care centre. NCI will also have focus in Urooncology, Gastrointestinal Oncology, Gynaecological Oncology, Community Oncology, Nuclear Medicine, Cell & Tumor Biology, Cancer Immunology, Radiation research etc. Wherever necessary the Medical Social Worker will facilitate the treatment of cancer patients. There will be Bone Marrow transplant facilities for Leukemia, Lymphoma patients supported with blood transfusion. There will be supportive departments in Anaesthesia, Pathology, Microbiology, Biochemistry, Blood Bank etc. There will be enough scope for recreation/ spiritual for all kinds of cancer patients from children to adults. To start with the NCI will have 300 beds with day care facilities and will be expanded to accommodate 500 beds.

The institutes will also have a dedicated Palliative Unit Department for training & research in palliative Care. There will be dedicated staff (5 doctors, 30 Nurses, 2 full time Pharmacist, 2 Physiotherapist, 4 Social workers and other supportive and administrative staff) for palliative care services. The NCI will ensure availability of opioids drugs including oral morphine. At least 10% of the total budget for NCI will be for Palliative care services.

There will be Administrative block, Research block, Academic block, OPD and other service blocks. There will also be facility for a 200 rooms budget hotel, a hyper market, basement parking, a pedestrian plaza. The institute will work in close association with the Tertiary Cancer Centres in the country.

The administration of NCI will be headed by Director who will be assisted by a Joint Director. There will be Medical Superintendent of the Hospital Block assisted with an Assistant Medical Superintendent. There will be a Administrative Officer, Accounts Officer along with other support staffs. Each clinical department will have a Professor assisted by Associate Professor and Assistant Professor. There will be Senior & Junior Residence too. There will be Chief Medical Officer, Medical Officer, Research Associates, Scientist, Veterinary Surgeon and Technical staffs at NCI. The Nursing Services will be headed by the Nursing Superintendent (NS) and assisted, Deputy Nursing Supdt (DNS) and Asst. Nursing Supdt (ANS). The ward duties will be carried out by the nursing sisters and the staff nurses. The Nursing Council of India norms of staffing will be adhered while calculating manpower requirement for different nursing units.

Establishment of NCI will have comprehensive cancer care facilities in Surgical, Medical, Radiation and Community Oncology and Palliative care. The institute will have facilities for Research & Development, Training and Capacity Building. There will be research fellows in areas of Epidemiology, Biostatistics, Cell Biology, Molecular Biology, Genetics, Pathogenesis, Cancer Screening etc. The institute will also have course on
Oncology Nursing. The institute will be good source of quality manpower in cancer research. There will be 1-2 research fellowship per year in the different areas related to cancer research totalling to 8-10 per year.

In view of the status of the institute as an apex centre for referral and research, the most sophisticated, state of the art instruments will be procured for both the research and clinical divisions. These institutes will be supported with a capital grant for construction, equipments related to cancer care services including palliative care & pathology services. Support will also be given for Human Resource development, drugs, consumables etc as a recurring amount.

National Cancer Institutes will give an undertaking to ensure generation of cancer care health professionals by the 3rd year (2014-15) of the 12th five Year Plan. They shall initiate/increase courses in MD/MS/Mch/DM (Surgical oncology, Medical Oncology, Radiotherapist, Palliative Care, Diploma courses in Palliative Medicine, Pathologist, Medical Physicists etc.). They shall initiate/increase courses in Oncology Nursing and Diploma courses in Palliative Nursing. They should function as institutes to generate cyto-technicians, cyto-pathologists and other paramedicals for cancer care services. These centres will be referral centres for research and treatment and provide specialized cancer care services.

Chittaranjan National Cancer Institute (CNCI) is an autonomous organisation jointly funded by Government of India and the Government of West Bengal. Support will be given for the existing institute to be up graduated and for a 2nd campus hospital to accommodate the increasing patient load. This will be the NCI for the east of India. There will be one established in the North & South of India.

e. **Human Resource Development:** Training will be provided at Tertiary Cancer Centers/State Cancer Institute for the health professionals for cancer care services. (District Surgeons/Physicians/Gynecologists, District Radiotherapist, Medical Physicist and Cyto-pathologist/Cyto-technician).

f. **Monitoring & Supervision:** Monitoring and supervision of the programme will be carried out at different levels through NCD cell through reports from the state, regular visits to the field and periodic review meetings. State and District NCD cell will be established at the selected States/ Districts for monitoring programme implementation.

g. **National Cancer Registry Programme & Research:** At present Population based cancer registry is present only in 23 institutes mostly in the urban area. The programme will be expanded to all TCCs and Cancer Treatment Institutes in the country for having a data base for cancer cases in the country including rural areas. Support would be provided for research activities related to cancer including surveillance.
h. **IEC activities:** Awareness generation about cancer will be done in the community through Inter Personal Communication, education, mass media etc.