## Report on MP model on Chemotherapy delivery system

The treatment of cancer is limited to comprehensive cancer centres & multispecialty hospitals located in big cities. The fear of cancer has limited the scope of its treatment beyond the confines of a cancer centre. In a country like India, with its limited resources, both in terms of infrastructure & talent pool compounded by rapidly increasing incidence of cancer, there is a crisis like situation in existing cancer centres. They are fully saturated & overflowing. The patients throng here in a large number both for diagnosis & treatment. The limited corporate hospitals cater to the elites & to the rich class. To increase the infrastructure, it will need both time & resources. Moreover the general class here is poor & has logistic problems to reach to a centre located far away. So there is an urgent need to diffuse the situation by creating patient friendly modules to address this issue as per our requirement.

Treatment of cancer has four parts- Diagnosis, treatment planning, treatment delivery and follow-up. Diagnosis & treatment planning require the help of a specialist. Treatment delivery has three parts-Surgery, Radiotherapy & chemotherapy. The first two modalities are available in speciality centres. Chemotherapy has two components- Planning and delivery. The prescription of chemotherapy has to be done by an oncologist. The administration of chemotherapy requires expertise. At present it is limited to cancer centres & big hospitals. The patient are reporting to the cancer centres every 3weeks for routine chemotherapies. It is time consuming, repetitive & requires logistics. If there is a solitary bread earner, then the livelihood is shattered. There is an urgent need for some doable solutions in cancer chemotherapy delivery. Here comes the path breaking Madhya Pradesh Cancer Chemotherapy Delivery Model.

Dr. Dinesh Pendarkar is an acclaimed medical oncologist working in Asian Institute of oncology in Mumbai. He belongs to Madhya Pradesh. He along with his nodal officer Dr. Tripathy has developed a model by which the delivery of anti cancer drugs can be done at the district head quarter level. In two years time they could develop nuclei for cancer chemotherapy in each of the 51 districts of MP. The motivation levels of staff of these centres (especially Ujjain) is commendable.

## Development of the model-

1. One doctor (MBBS/ MD) and two nurses were identified for each district.

2. They were sent for training to Mumbai under Dr. Pendarkar for one month each. It was a hands on exercise as well as motivational training. Once they came back to the districts, a day care centre was established to use their expertise. They were authorised to execute the treatment plan, prescribed only by a cancer specialist. They were always on constant touch both with consultants as well as the patients. Patients who could not travel to far off places for want of time & money were successfully treated in these centres. All the treatment is free for all including all drugs. Being a district hospital, there were always some qualified personals to handle if there was a need. Over a period of time this nucleus group developed enough confidence to handle any situation. It took them only six months. The initial pilot project was for 8 districts & in three months time they extended it to all 51 districts in MP.

3. These trained doctors & nurses in turn educate others in the delivery of cancer chemotherapy & the talent pool expanded. They have created a database for cancer in their state.

4. The drug procurement system in MP is a decentralised one. The CDMOs are empowered to buy as per their need & budget allocated. The central drug purchasing agency at the state level only fix up the price & company for each item. The drugs are stored properly as per the required temperature.

4. At present these cancer clinics have developed as contact point in the district for cancer counselling, database, follow up of treated patients & palliative care. They have developed such credibility, that there is a regular downward referral of patients to these centres from comprehensive cancer centres for adjuvant, palliative chemotherapy.

## Difficulties they faced-

- The team required training by a dedicated mentor. It is both for good practices & motivational. The persons trained in medical colleges had to be retrained under Dr. Pendarkar.
- 2. Initially they were dispensing all anticancer drugs including MAB therapy. This was found to be a little difficult in containing the expenditure. Now they have limited it to 19 drugs.
- 3. For small volume or low priced items like5 FU, Methotrexate: the supply was tardy & unreliable. To overcome this, they have pooled 7 to 8 districts to create a hub for such supply.

## How to implement it in Odisha-

- 1. Declare Dr Dinesh Pendarkar as the mentor for the project.
- 2. Identify one nodal person in Odisha to handle the project with dedication.
- 3. Identify 5 remote districts with adequate infrastructure.
- 4. Identify at least one doctor in each such district & two nurses- they are to be trained by Dr Pendarkar for one month and in the district centre at Ujjain for two weeks.
- 5. On arrival in the district, they must be allowed to work in the cancer clinic immediately, or else they may loose motivation.
- 6. The field team from MP, Ujjain district (Both the doctor & nurses) must be invited to visit these districts to motivate & handhold the staff at our end.
- 7. The state nodal officer will monitor their work, guide them professionally, and maintain the supply of medicines and most importantly able to instil confidence in them by regular on site visits.
- 8. Patients must attend this centre at their free will. In the beginning, it is better, if they take their first course in a cancer hospital. Then subsequent courses can be administered here.
- 9. Logistics must be developed to store the medicine.