

1 Reduction of Cost of Cancer Treatment through Government 2 Non Government Interface

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6 **Abstract**

7 Treatment of cancer is not only expensive but is a long term proposition. Affordable cost of
8 treatment remains a challenge in India, and perhaps other developing countries, in spite of
9 rapid socioeconomic development. The Indian Institute of Head Neck Oncology, a charitable
10 cancer institute, decided on three pronged approach reaching out to far off places in India and
11 develop a low cost charitable treatment facility. Our activities over last 30 years were
12 facilitated by support from national and international agencies/organisations. Grants from
13 World Health Organisation on 7 occasions, Australian Agency for International Development
14 on three occasions, Government of India on three occasions, the government of Japan, the
15 Oxford international centre for palliative care and more than a dozen organizations and
16 agencies helped us to successfully make a:(1) Sustained effort to detect cancers early.(2) Train
17 health care workers on early detection.(3) Get equipment support.(4) Develop a charitable
18 cancer facility and thereby offer low cost treatment.

19

20 **Index terms**— cancer cost reduction, charity treatment, grants and donations.

21 **1 Introduction**

22 Lobar figures point out to a rising number of patients of cancer and India is no exception. A Planning Commission
23 report estimates that about 2.8 million people have cancer at any point of time and half a million die of the
24 disease each year, high death rates clearly indicating late stage diagnosis 1 . The number of cases is expected
25 to go up because of an increase in life expectancy, the incidence is projected to Rise five-fold by 2025 and the
26 prevalence is likely to increase to 19% in men and 23% in women by 2020. 2 According to Globocan 2012, an
27 international cancer research project, one in five cancer insurance claims is by those between 36 and 45 years of
28 age 3 . This means that the disease is set to disrupt the family's finances due to the loss of a source of income.
29 Disparities in income, shortage of low cost cancer facilities and late diagnosis compound this problem.

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31 **2 Background**

32 Cancer Care is not easy or cheap anywhere in the world but one of the biggest challenges for patients in India is
33 meeting the varied costs of Cancer treatment. The main reasons for this are:

34 (1) Cancers are detected late needing prolonged treatment, oftentimes multidisciplinary such as radiation or
35 cyclical chemotherapy. (2) Most of the cancer treatment facilities are located in urban areas with a cultural
36 disconnect between village folk, urban areas are well penetrated but vast rural areas remain untouched.

37 The present availability of teletherapy machine in India is only about 0.3 per one million population, whereas,
38 in USA and UK, the availability is 8.2 and 3.4 per million respectively. Considering the fact that, in a developing
39 country, the requirement of teletherapy machine is 1 machine per million population, India should have at least
40 1000 operating machines 4 , there are only about 430 teletherapy machines operating in the country 5 thus
41 making affordable cancer treatment accessible to village folk which comprises of 80% of Indian population an
42 issue. On one hand is the financial implication and on the other, the distances needed to travel for going through

4 CHALLENGES WE FACED

43 prolonged treatment, often necessitated by late diagnosis. Then there is the concern about the rising Cancers
44 cases.

45 (3) The number of patients is expected to go up further also because of increase in life expectancy. (4) The
46 staggeringly high cost of equipment required for setting up a cancer hospital is largely due to the fact that
47 equipments, generally imported, are costly; hospitals have to pay a fortune for imported equipment. Aware of
48 the fact that the facilities of treatment were rather sparse, we began our efforts by first setting up an organization
49 fulfilling the statutory norms for establishing a Cancer center.

50 The focus was on India's commonest Cancer in men, a center for the head and neck Cancers, now known as
51 the Institute of Head and Neck Oncology.

52 The Indore Cancer Foundation, a public charitable trust, has worked in state of Madhya Pradesh focusing on
53 district based early cancer detection, training of health personnel, as well as development of a charitable cancer
54 center focusing on India's commonest cancer in men.

55 In Indore our legal status is of a Public Charitable Trust. Our objectives include health education, early
56 detection and the setting up of a fully equipped Indian Institute of Head and Neck Oncology; as a flag ship
57 project of the parent organization the Indore Cancer Foundation Charitable Trust.

58 3 III. District Hospitals; A Key Component

59 for Health Care Delivery

60 For Cancers, the health care delivery system in India follows two bifurcated pathways, commercial corporate
61 model and the public health system. While the private, commercial hospitals run on their own steam, public
62 hospitals have a structured system and despite monumental constraints cope not only Cancer but with multiple
63 diseases; communicable as well as non-communicable diseases and this they accomplish with commendable
64 tenacity.

65 One of the public health systems the Primary Health Centres which are scattered far and wide, totaling 28,863
66 in number 6. An alarming number are in dismal conditions, severely understaffed and equipped. These are the
67 first point of patient entry, the referral then follows a structured system to the District Hospitals, which are the
68 real hub of activities. The last census exercise in 2011, carved out India into 64 districts 7. The health centres
69 are within this network.

70 Most patients of suspected Cancer, first report to the district hospitals and then reach the nearest (7)
71 government controlled Cancer Institutions situated mainly in the Medical Colleges. They are often referred
72 to 'higher Centres' the regional or tertiary Cancer Centres.

73 Based on the generally accepted and proven perception that Cancers were detected late we focused on efforts
74 to ensure that they are detected early, even in the rural areas. We did this by reaching out to the districts
75 through various innovative ways.

76 We used the established network of government health delivery training the local doctors on early Cancer
77 detection.

78 Our team of doctors examined the possibly suspect cases in these camps. It helped save patients cost. The
79 patients did not have to travel to larger cities or towns for the first specialist's check-up, or 'queue' to see a
80 consultant or pay for services. The push for this detection through the outreach program came from Australian
81 High Commission, which provide a significant financial backing for it.

82 Reaching out to the small town folk was challenging. Many villagers had misconceptions that cancer is a death
83 sentence. Our focus was therefore identifying high risk groups i.e. those with suspected pre-cancerous lesions
84 such as leucoplakia, or sub mucous fibrosis but also spreading education against the usage of tobacco. During the
85 process of carrying out our detection camps, we honed our communication skills, and acquired a deeper insight
86 into their psyche. Soon our credibility rose, our network grew wider and we were accepted into the grass root
87 system.

88 While outreach activities gathered momentum, funds helped us to achieve multiple targets. Grants from the
89 World Health Organisation facilitated the training of the Primary Health Workers on ways of selfexamination
90 to identify precancerous conditions. Door to door survey found prevalence of tobacco usage in 69,000 people
91 brought to fore the use of tobacco in a high number of school children thus reinforcing the fact that tobacco
92 outlets should be kept away from schools.

93 IV.

94 4 Challenges We Faced

95 Our aim was not just holding detection camps or targeting primary health workers, it was to empower the local
96 doctors to detect Cancer early, most of whom were in the government health system. We reached out to them
97 through the government controlled district administration; getting them to organise CMEs on early detection
98 of Cancer, with a structured program that also included a component of pre and post training evaluations.
99 Organising such programs helped us acquire first-hand knowledge of the gaps in the system in contemporary
100 knowledge that needed to be bridged. Over the years in the Madhya Pradesh, in central India, we have undertaken
101 more than 200 training programs in 11 districts.⁸ We have thereby trained doctors, nurses and paramedical staff
102 through free CME courses. Training was provided on what would be the warning signs of Cancer and then to

103 those who had the requisite qualification, on how to perform simple examinations like fine-needle aspiration,
104 cytology, pap tests etc.

105 Credible efforts paid dividends. More work came our way. As efforts gathered momentum, we focused on
106 palliative care training for nurses teaching them the methodology of basic and essential aspects of nursing palliative
107 care home care of terminal cancer patients in their own environment. We honed their communication skills, a
108 vital need when dealing with the patients' families. One of the WHO grants enabled us to train doctors in
109 district hospitals not just in our own state but in Rajasthan and Chhattisgarh as well. The Australian agency
110 for International Development provided a palliative care van equipped with a mini laboratory for on the spot
111 evaluating patients suffering from terminal cancers and providing them with practical and feasible care in their
112 own precincts.

113 The above programmes have gone a long way in reducing the efforts and cost liabilities of cancer patients and
114 their families. Going to the patient has proved to be the strategy that worked in alleviating at least some of our
115 patients worries.

116 In the third decade of our work, a philanthropic organization supported us by partly funding for the
117 development of an in-house Palliative Care Centre at the Indian Institute of Head and Neck Oncology, through
118 running of a palliative centre in a charitable centre has challenges.

119 **5 V. Surgical Work as a Cost Reduction Approach**

120 On many occasions the cancer detection camps were converted into surgical camps. Some District Hospitals had
121 operating facilities where surgical work for cancer was possible. Prior to these surgeries, all the pre-operative
122 tests as per conventional checklists were followed. We began with simpler risk free minor surgeries. Surgical
123 staff in the district hospitals, trained and adapt in operative as well as pre-operative work were identified and
124 included. This inclusion helped in our capacity enhancement as well as increased their capacities and exposure
125 to such surgeries, enabling them to possibilities of performing these procedures on their own in future. Our team
126 included the surgical and its support staff. The local staffs were given special instructions on care of the patients.
127 Besides we ensured that our team stayed overnight in the District hospital to take care of any post-operative
128 surgical or medical complications if any.

129 This strategy made sure that not only was cancer caught fairly early in many cases, but primary surgery
130 and care was available at the nearest hospital for patients. Many of these patients would have hesitated too
131 long before visiting a big city hospital, letting the cancer reach advanced stages, escalating remedial efforts and
132 accompanying costs.

133 Here too, going to the patient has proved to be the strategy that worked.

134 Between 2000 and 2017 we have performed more than 3048 free cancer surgeries. We held more than 214 free
135 Cancer Camps in Madhya Pradesh, Chhattisgarh, Maharashtra, Gujarat, Rajasthan & Uttar Pradesh, examined
136 more than 2,50,000 people in high risk groups, organised more than 220 Cancer Awareness Programmes held
137 more than 200 Training Programmes on early detection and palliative care for medical personnel especially for
138 doctors, nurses and paramedical staff of the Government health delivery system, the extensive and only health
139 services within the reach of the economically weak and distressed in the remote areas of the country. ?? The
140 various camps and training programmes are our long term strategy for reaching to these areas not only for care
141 and treatment but also for reducing the economic burden that cancer imposes on it host with the hope that in
142 due course the numbers of well-trained doctors and their support staff will reach its optimum level, at least in
143 poorer states.

144 In addition to the support from the state Government, Australia and W.H.O., have enabled us to reach out to
145 all the tiers of the District Health Care system, its Doctors, the Nursing Staff and the Primary Health workers.

146 **6 VI. Beginning of Charitable Institute**

147 Detecting cancers early was not enough, we needed to have a treatment facility. We decided to develop the
148 Institute for head and neck cancer. The only teletherapy machine in our city, with an estimated population then
149 of ten lakhs, was non-functional and the closest Radiation facility was then an overnight train journey away, at
150 Padhar in Madhya Pradesh.

151 The development of any cancer Institute required several components. A plan of action, land, equipments and
152 'seed capital. We had none of this to begin with.

153 While reaching out to people detecting cancers early as well as training in palliative care were ongoing we
154 were committed to our core objective which was to make the cost of treating cancers affordable and the facilities
155 accessible, Government of the Madhya Pradesh allotted ten acres of prime land on a 99 years of negligible lease
156 rent. This was the kick start of a powerful government-support. It kick-started our Institutional process.

157 As though providentially, side by side we received as gift wrapped, a teletherapy unit from the Nargis Dutt
158 Memorial Foundation, Ottawa, Canada. Armed with two key components, we began radiotherapy treatment. The
159 gifted Cobalt unit treated patients for years, treating free patients as well as partial charity through cross subsidy.
160 The total number of beneficiaries was 1344, our updated figures shows that till October 2017, radiotherapy was
161 offered to 6031 patients of which 1396 were given total charity treatment by radiotherapy alone and partial charity
162 was offered to 2050 patients. ??0 The teletherapy unit, received from Canada needed to be replaced. We came

163 to know that the country's atomic energy commission had taken up the development of indigenous teletherapy
164 unit and the indigenous machine had state-of-the-art features in safety, controls and user interface a fully closable
165 collimator for improved radiation safety was a unique feature of the machine.

166 Our quest for procuring the indigenous teletherapy unit was achieved with the help of government of India.

167 7 VII.

168 8 Conclusion

169 It is possible to get support for charitable anticancer activities though sustained support is an I issue. In our
170 thirty years of working, we succeeded in reaching out, developing a partnership with government health care
171 systems and use their resources, reducing cost thereby.

172 We were supported for cancer detection, for palliative care on a project to project basis for various programmes.

173 The Indian Institute of Head & Neck Oncologytoday, set up in ten acres of land received at Rupees 1 lease
174 from the State government, has nearly all the equipments received as grants in aid, a testimony to the fact that
175 resolute action aimed at cost reduction gets supported. Credible work gets help, there are llenges though. While
176 capital expenses are often met, operational costs need to be generated, thus making the fight against cancer and
177 reducing its costs, relentless and needs to be addressed by policy makers in India.¹

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