

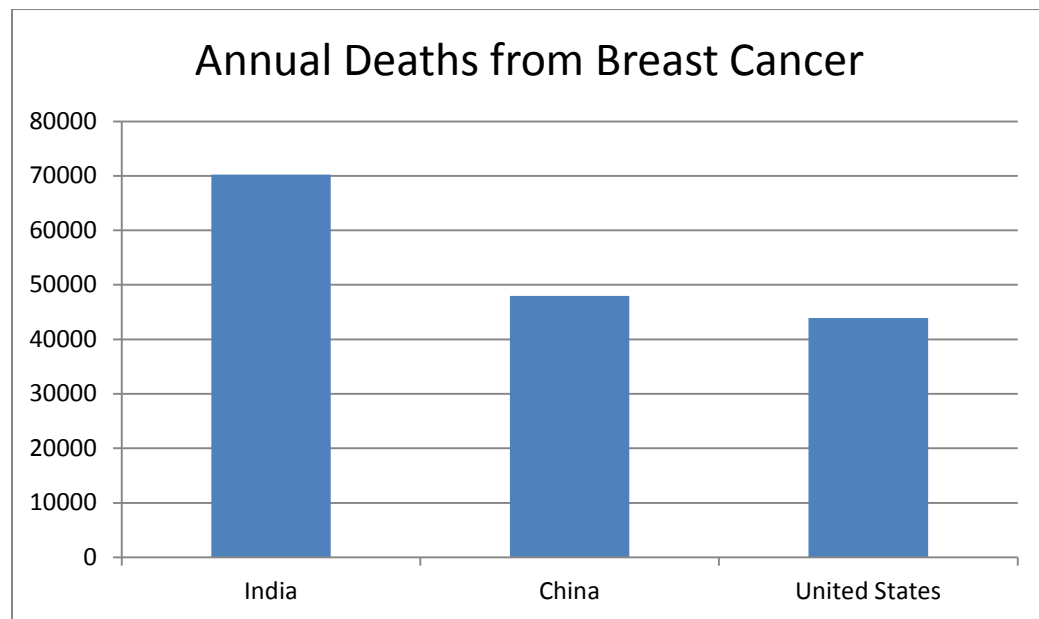
Fight Breast Cancer with Education and Early Detection: Concept Proposal and Request for Funding

Introduction

Despite its economic strides and technological advances, regrettably, India remains one of the poorest countries in the world, with 29.8% of the population living below the poverty line. The abject poverty has kept crucial medical needs unmet for a large proportion of the population, especially village women. This proposal summarizes a targeted plan of Maanavseva (a non-profit organization) and its organizational partners for the early detection and prevention of breast cancer in India.

Why Focus on Breast Cancer?

Cancer is among the leading causes of death in the world. As in other countries, breast cancer is the most common cancer in India, accounting for about 25% to 31% of all cancers in women (PCBR 2009-2011). The deaths of women in India due to breast cancer are among the highest in the world as can be seen in the graph below (source of data: GLOBOCAN, World Health Organization, 2012).



The Future Can be Bleaker Than the Present

Due to early puberty and late menopause, Indian women are diagnosed with breast cancer almost a decade earlier than their counterparts in the world. Also, the average age of

developing breast cancer in India has shifted from 50-70 years to 30-50 years, and cancers in the young tend to be more aggressive. In absence of targeted and well-implemented interventions, the incidences and deaths due to breast cancer will only increase in the future. By 2020, it is predicted that one fifth of the world's cancer cases will be found in India. Experts project breast cancer to strike approximately 2.5 lakh women in India by 2015 and Indian Council of Medical Research places incidence of breast cancer at 30 to 33 per 100,000 women in urban India.

Challenges in Regular Screening for Breast Cancer in India

While the need for preventing breast cancer is dire in India, the challenges are enormous due to financial, cultural and social factors listed below. Any solution approach needs to factor them in before blindly copying the solutions practiced in developed countries.

- In India, routine physical examinations are not common. Medical check-up does not appear high on the radar of poor people and they do not see a physician until experiencing a symptom. As a result, the ailment is diagnosed late, sometimes too late.
- Women do not place their health as a priority over other needs of the family such as children's education, daughter's marriage etc.
- Discussion of health issues concerning private parts such as breast and vagina are considered awkward by women and are kept secret even from their husbands in the initial stages, thereby risking progression of the disease.
- Decisions regarding the health care and treatment are often dictated by the older and male family members who may not attach the needed importance to the women health issues until it is too late. While the family support system is strong, ignorance and indifference can make the problem vexing. Educating the decision-makers is therefore very important.
- Many husbands are agricultural laborers, who do not understand why their wives need to go to another town for an examination and to stay away from work when they appear fine from the outside and are able to work.
- While the rich can afford medical care, and workers in the organized sector get medical expenses reimbursed by their employers, unemployed or underemployed individuals and those in the unorganized labor sector do not have any health coverage except Government subsidies and schemes.

- Primary Health Care Centers in India are mostly ill-equipped, inadequate and ill-managed.
- In India, many non-oncology medical professionals (general surgeons, gynecologists etc.) tend to treat breast cancer themselves. These result in incorrect decisions, unwanted investigations, and botched up surgeries which adversely affect the outcome of the procedure and longevity of the patient. A correct diagnosis at the outset minimizes these ill-effects.
- Government schemes that subsidize or pay for the treatment expenses for UPL (Under Poverty Line) citizens are difficult to navigate especially for illiterate population living in remote villages.

The best and most economical treatment: Awareness and Early Detection

Breast cancer is perhaps the only form of cancer that can be cured by appropriate treatment. However, the effectiveness and cost of the treatment, and chances for survival are optimized with early detection. The chances of women surviving first or second stage breast are bright, if a diagnosis is made in time. If the breast cancer is identified early, treatment is less invasive, survival rates are higher and the quality of life is better. On the contrary, if the cancer has spread to other organs and becomes Metastatic, there is no known cure. Therefore, creating awareness about breast cancer and early detection through mammogram screening is extremely important and the only way to win the war on breast cancer.

A majority of India's population lives in rural areas. There has been improvement in health care services both the central and state governments have developed initiatives to improve the health of underprivileged. Each area of around 5,000 inhabitants is allocated a female Village Health Nurse (VHN), who is responsible for disseminating and providing basic health services and information. However, the numbers needing the diagnosis and treatment are too large for the physical, financial and managerial resources currently available. A scientific management approach is needed to harness the needed resources and to deploy them effectively.

Non-profits: A Lynchpin in Breast Cancer Treatment:

Various efforts are being made by the governmental and non-government organizations to address the issues of education, awareness and early screening of malignancies in women including breast cancer. However, considering the population, limited infrastructure of

medical facilities, lack of education and the cultural challenges, there is huge gap between the practices of developed countries and India. Even though the awareness has started to spread, lot more work is needed to elevate the preventive health care standards of Indian women in general and rural women in particular.

India does not have the required number of qualified medical professionals and private hospitals to treat cancer patients. Indian Government is also trying to establish new hospitals and some state governments are also addressing the issue of affordability of the treatments through schemes like “Aarogyasree”. However such schemes are inadequate considering the population and poverty.

Notably, the current governmental efforts are directed toward the diagnosis and treatment phases of the disease rather than education and early awareness. In the latter area, some medical camps are being organized by NGOs and community organizations but such efforts are sporadic rather than systematic and sustained. Very few focused efforts are being made to identify the disease at an earliest stage through 100% screening of targeted population. Worldwide, studies have shown that early detection of breast cancer through mammogram screening helps in diagnosing breast cancer at least 5 years before it manifests into a recognizable symptom. Identification of cancer at an early stage widens treatment options, reduces expenses of treatment, alleviates the pain and suffering of the patient and improves her life expectancy and quality of life.

The Need

Ideally, an Indian woman should get a mammogram done once every two years after the age of 40, and each year after the age of 50. Village women who cannot afford to pay for the screening and for the transportation to the medical centers should be able to get the breast cancer screening by mobile mammography and ultra sound.

While early screening is important, the importance of enhancing the awareness and understanding of breast cancer cannot be overemphasized; it will help in making correct decisions and selecting qualified medical professionals for the treatment. In India, awareness of breast cancers is very low. Majority of women approach physician only after the lumps are formed and in many cases are a few centimeters big. About a third of the women see the physician when their cancer has advanced even more. Why so late? Because most women are not aware of the symptoms of breast cancer and do not know that a painless small lump, if ignored, can potentially become a source of expensive and painful a malady, sometimes even irreversible.

The Catalyst for the Initiative: Maanavseva

Maanavseva is a non-profit organization started in Massachusetts, USA by a non-resident Indian couple, Lakshmi & Sastry Dwivedula, Lakshmi is a breast cancer survivor and recently underwent surgery, chemo and radiation at Dana Farber Cancer Institute (DFCI), one of the best cancer hospitals and research centers in USA. Having lived through the problem, the family has decided to reach out and help the underserved in rural India by setting up a non-profit organization – Maanavseva - with the help of like-minded friends.

The organization functions under the policies determined by its board of directors and has been recognized/approved by IRS as a 501(C)(3) charitable organization enabling all contributions to Maanavseva, tax deductible.

Maanavseva aims to build a successful model for education, awareness, acceptance, preventive screening and early detection of breast cancer through 100% screening. Initially, the target group will be women in rural India, where education levels and affordability of screenings are low, and medical facilities far away.

Based upon the initial study and discussions with medical professionals, friends and volunteer organizations in India, the scope is now expanded to include the other two most prevalent cancers among rural women, cervical and oral. Later on, Maanavseva will undertake other community projects to promote the cause of health and education in rural India.

Project: Early Detection of Breast Cancer

100% screening as per the established guidelines of preventive health care is the only way that one can detect the malignancies at an early stage. Unfortunately, unlike many developed countries, Indian healthcare system currently does not have effective mechanisms to accomplish this objective. In addition to the lack of practice of preventive screening, India poses several other unique cultural, social and other challenges that prevent regular screening of women as a preventive measure. These factors can be quite challenging. To address them, volunteers, workers and professionals from medical and non-medical fields need to come together. A breast cancer patient not receiving treatment - because she cannot afford it - is a blemish on the rest of the society. It is our moral responsibility to help the needy and ensure that NOT a single cancer patient has to go without treatment.

Four Pillars of Success: The Partnering Organizations

The following four organizations have agreed to collaborate and contribute to the activities in the project.



Homi Bhabha Cancer Hospital and Research Center, Visakhapatnam:

Homi Bhabha Cancer Hospital is an approved 100-bed Cancer Hospital & Research Center under the Department of Atomic Energy, Government of India, and will use the Tata Memorial Cancer Center, Mumbai as the model to emulate. The outpatient department has already started and the hospital is expected to be fully functional by end of 2016 and will serve as an advanced cancer care hospital in the region.

Dr. Raghunadha Rao Digumarti, a reputed oncologist with over 25 years of experience is the director of this institute and has kindly agreed to be an advisor for Maanavseva's project. Homi Bhabha Research Center, under his leadership, has also agreed to train the volunteers who will conduct door to door campaigns to provide medical kits, literature and other support. The institution will also process the samples collected, analyze screening and provide

results and support the follow-up efforts. Based upon the results of the screening, the Institution will also serve as the hospital wing of the project for treatment and care.

Rotary Club, Vizianagaram:

Vizianagaram Rotary club with its distinguished and dedicated members has a longstanding record of successfully implementing community projects for the villages around Vizianagaram. It has identified in the Vizianagaram district three villages - Dhannalapeta, Kondakarakam and Koradapeta - for pilot testing of the project. Each village belongs to Nellimarla mandal. VZM Rotary, through its earlier work, has their demographic information and is familiar with the community leaders in the three villages. In each village of approximately 1000 households, we would target reaching an average 300 to 400 women.

VZM Rotary has committed to support the project through following activities:

- Sponsor and submit the project plan to acquire Mobile Mammogram Unit through the Rotary Global grant Program and help raising funds together with Maanavseva as necessary.
- Help, coordinate and organize the training activities for the volunteers.
- Organize and coordinate the door to door campaign in the identified villages with the goal of 100% coverage of the targeted population as per the established guidelines
- Partner with Maanavseva to guide, implement and follow-up of the project.
- Contact with local community and communicate with the Public.
- Collect feedback and improve the process and help in building subsequent phases of the model.

Rotarian Mr. Sri Kiran Babu, Current President of the Club and several other Rotary Club members and Rotarians such as Mr. M. Sudhakar, Bajaj Vehicles Distributor and Business Owner (Ex Rotary Governor), Mr. RK Jain (Ex Rotary Governor), Dr Padmavathi, the President-elect of Rotary Club, Dr. Sreekanth, Children's specialist, Dr. Prasad of Tirumala Hospitals, Dr. Venkateswara Rao Mr. K. Srinivas, Himamsu Book Store Owner and active Rotarian, have expressed their enthusiastic support for the project.

Vikasa Tarangini (Sri Chinna Jeeyar Trust, Vizianagaram:

Vikasa Tarangini is the NGO wing of Sri Chinna Jeeyar Trust. With the financial help and guidance of Mr. Shridhar Cherukuri, the NGO has conducted camps for free medical check-

ups for cervical and oral cancers in women. Their committed volunteers have agreed to participate in this project to contribute their experience and organizational abilities.

Phases of the Project

The project will be completed in phases as explained below:

Phase 1: Pilot to Develop the Model

This phase will focus on “early stage detection of breast cancer” as per the standards and guidelines of developed countries. A pilot project targeted at a few villages with the objective of covering 100% of women through a door to door campaign of education, awareness and screening will be conducted. In the course of implementing this objective, Maanavseva will identify and address various challenges faced so as to minimize their effects in the subsequent phases of the project. Help will be sought from the local civic bodies, community, social, charitable and governmental organizations as well as prominent personalities in this endeavor. Maanavseva aims to identify and establish such interfaces / linkages as necessary, act as a catalyst to achieve the desired objective and provide financial and other resources as needed.

A key component of the model entails is the ability of “Maanavseva” to conduct mammogram screenings on-site. Village women in India are very reluctant to go to a screening facility at a distant hospital even if transportation and other financial incentives are provided because of the social, financial and cultural issues mentioned earlier. Mobile mammograms facilities have been successful in overcoming these hurdles in many other countries. Hence, the project plan includes procurement/ deployment of a suitable mobile vehicle fully equipped with mammogram and other necessary medical equipment on-site.

Phase 2: Model Refinement

The objective in phase 2 of the project would be to refine the processes and protocols using the experience and understanding of the issues during Phase 1, and extend the project to include an additional cluster of villages. This should result in a working, documented model that could be replicated with modification, if necessary, in other districts and states, and estimate the physical and financial resources needed.

Phase 3: Replication and Scaling Up of the Model

Phase 3 will focus on fund raising on a larger scale and extending the model to the entire country. Based on the experience of Phase 2, this phase will aim to prepare a blueprint to make “early detection of breast cancer” a sustainable model, and an integral part of preventive health care in India.

Implementation Details of the Pilot Project (Phase 1)

The founders of Maanavseva , during their India visit in January/February 2015, discussed the concept and broad contours of the project with several individuals and organizations. The response was very enthusiastic and many constituents have come forward to be part of this non-profit project. After additional discussions and exchange of ideas, various components of the phase 1 project plan were developed.

Women above 40 in the three villages namely Dhannalapeta, Kondakarakam and Koradapeta are the target population for the Phase 1 of the project. It will aim to enhance education and awareness by conducting a door to door campaign consisting of the following activities:

1. Obtain basic household information and document the current state of awareness.
2. Provide basic education on the three cancers through literature, oral talk and pictures.
3. Demonstrate Self Examination of Breast / Conduct Breast Examination.
4. Ensure that all women above 40 participate in the medical camp.

The other part of the project in this phase will be to offer mobile mammogram screening facilities detailed below.

Mobile Mammogram Unit – A key component for success

For the success of phase 1 of the project, as also for the remaining phases, a key component needed would be a mobile mammogram unit.



The mobile digital mammography unit holds significant potential to reduce breast cancer morbidity and mortality by improving access to screening for women in hard to reach or medically-underserved communities. With the potential to link the digital image transfer through to a specialist reporting center, it will bring breast imaging expertise to population residing in remote parts of the country.

The mobile unit needs to be designed with a high level of resistance to the environmental factors such as vibration, extreme temperatures and humidity. For effective functioning, the Mobile Mammography Unit will need to be a self-contained, fully air-conditioned vehicle with the following minimum specifications:

- Heavy-duty commercial chassis - not an RV-type
- Air-ride suspension for comfort and equipment protection
- Automatic leveling system for quick and safe setup
- Robust Central Air/Heating System for efficiency and comfort
- On-board diesel generator for full off-site operation
- Full ABS air brake system
- Power driver's seat, mirrors, sun visors, and more!

The mobile unit will have to be equipped with a mammography machine, a CR system to digitize and scan images, work stations with wireless connectivity, a changing room for the patients and waiting area, doctor's consultation desk and preferably a TV which will play breast cancer awareness videos to the public waiting outside.

Capital Budget

Cost Element	Approximate cost in Rs. (Lakhs)
Cost of vehicle chassis	17.00
Body work & Modifications, Generator etc.	40.00
Mammogram Unit	45.00
CR and other Medical Equipment	23.00
Total Estimate	125.00

Operational needs and Maintenance of Mobile Unit:

In addition, to the capital costs, the Mobile unit will have to be maintained regularly, needs to be kept at the desired temperatures all the time and should be adequately staffed with trained personnel to ensure safety of vehicle, equipment and operations. It is expected that 15 to 20% of the capital cost (Rs. 18 to Rs. 25 lakhs) will be required annually to staff, operate and maintain the vehicle.